ISSUE SIX • MARCH 1988 • £1.50

Atari ST
Amiga
CBM 64/128
Spectrum
Amstrad
+ more

ACE

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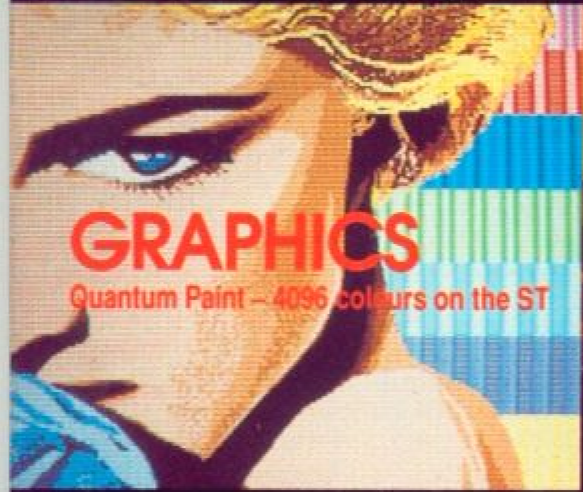
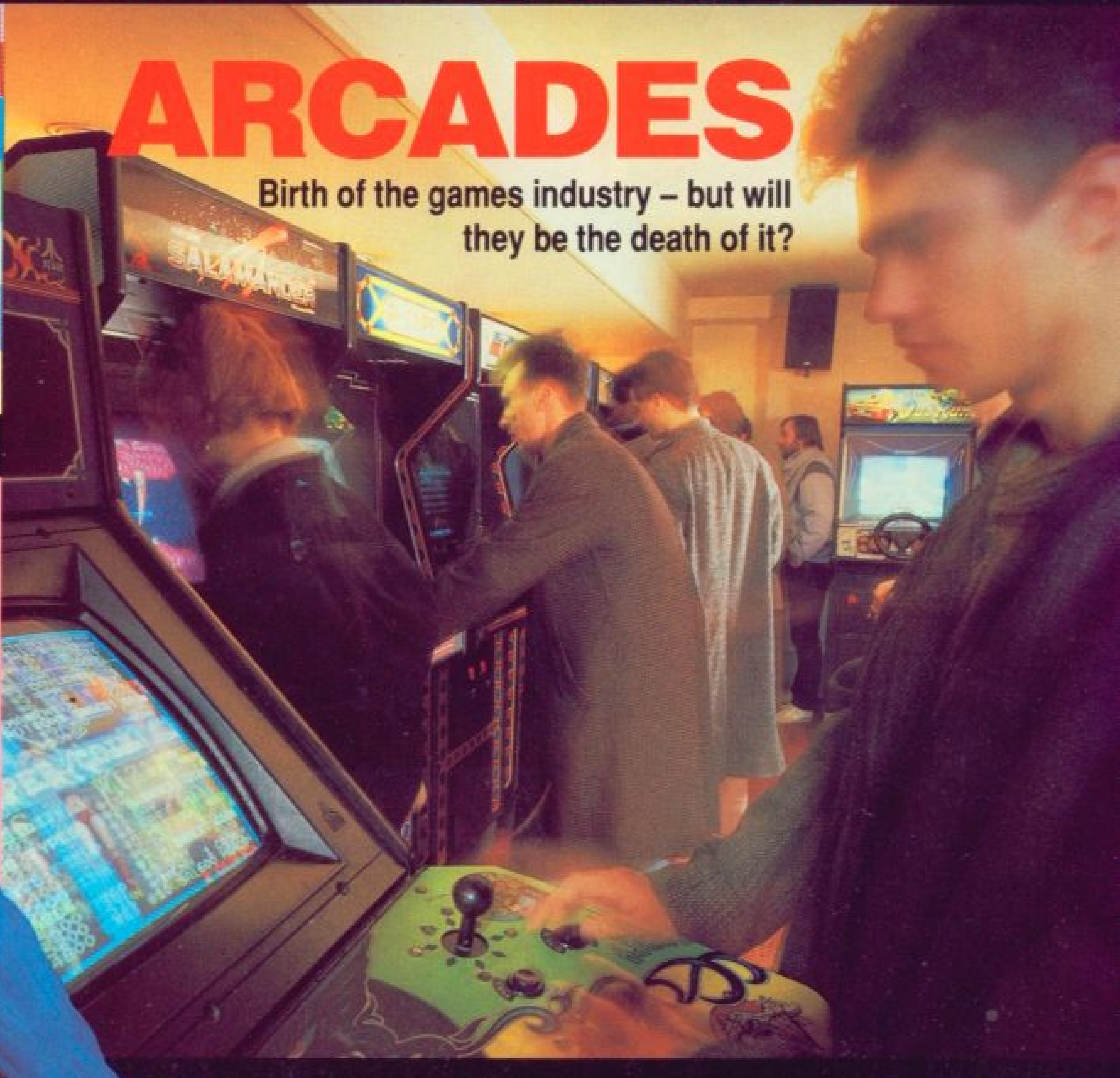


GRAPHICS

Quantum Paint – 4096 colours on the ST



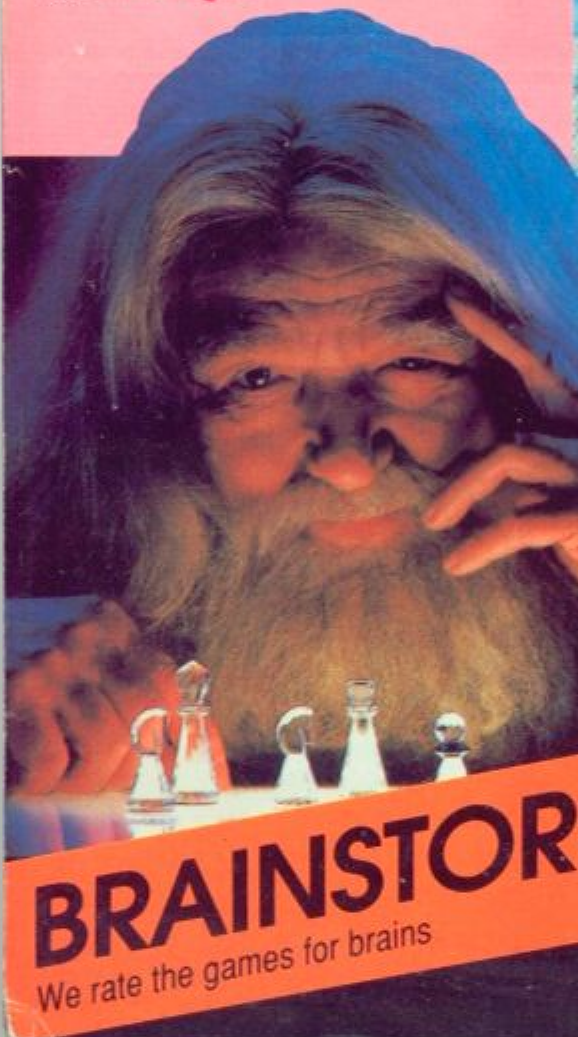
ARCADES

Birth of the games industry – but will they be the death of it?

SOFTWARE BUYER'S GUIDE

FULLY UPDATED

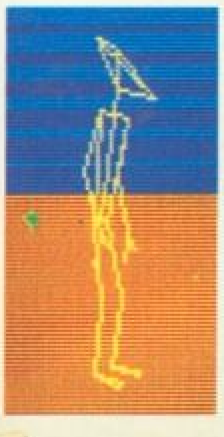
The best 50 games money can buy reviewed in the ACE **Pink Pages.**



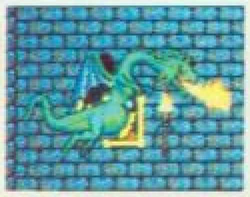
BRAINSTORM

We rate the games for brains

GAMES

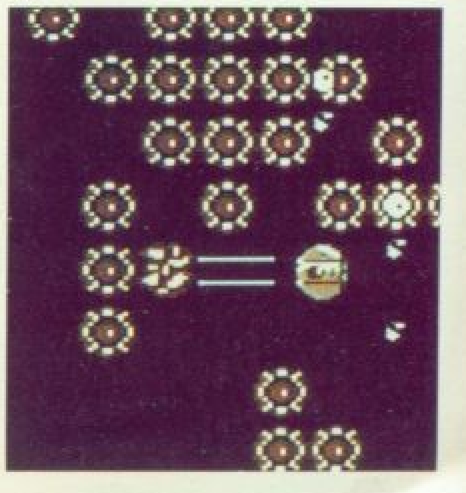


ECO
Ocean's Dodo?



BLACK LAMP
Beautiful Firebird frolic

HUNTER'S MOON
Up the workers



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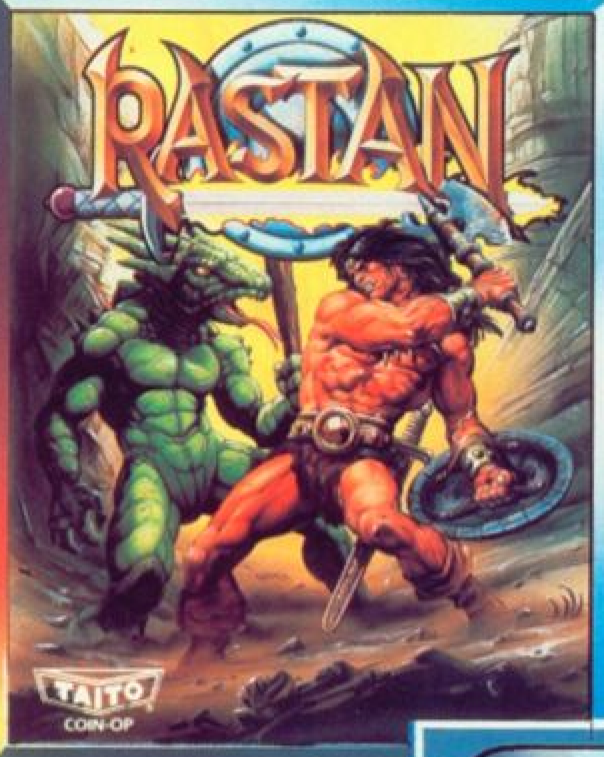
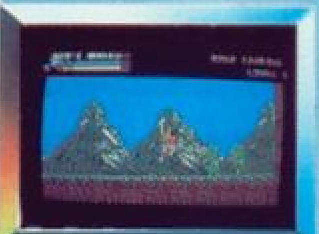
CASSETTE

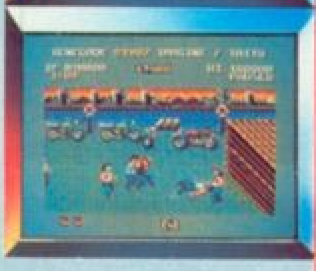
ARC

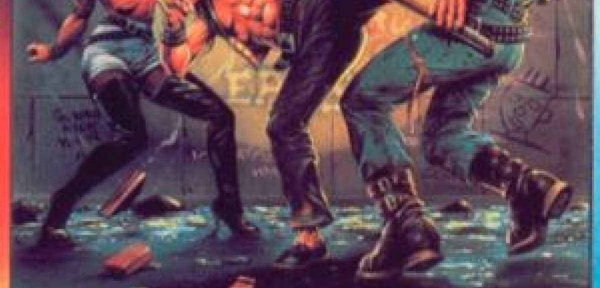




...the Warrior King.
The latest hit coin-op from Taito.
Lands that produce men of legend, dragon slayers, lie in his shadow – guardians of evil fear his fire spewing sword, the axe he weilds as swift as lightning. State of the art programming makes a true simulation of the Arcade hit for your home micro. Enjoy superb graphics and realistic action as RASTAN takes on a world of dangers – magical wizards, fire breathing lions, bats, snakes, skeletons and finally the living dead. Is it more than you can handle?

CHAM





In the knife-edge world of the vigilante there is no place to rest, no time to think – but look sharp – there is always time to die! From the city subways to the gangland ghettos you will always encounter the disciples of evil whose mission it is to exterminate the only man on earth who dares to throw down the gauntlet in their path – the Renegade. A breathtaking conversion of the arcade hit by Taito now for your home computer. With all the original play features.
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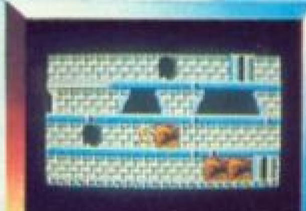
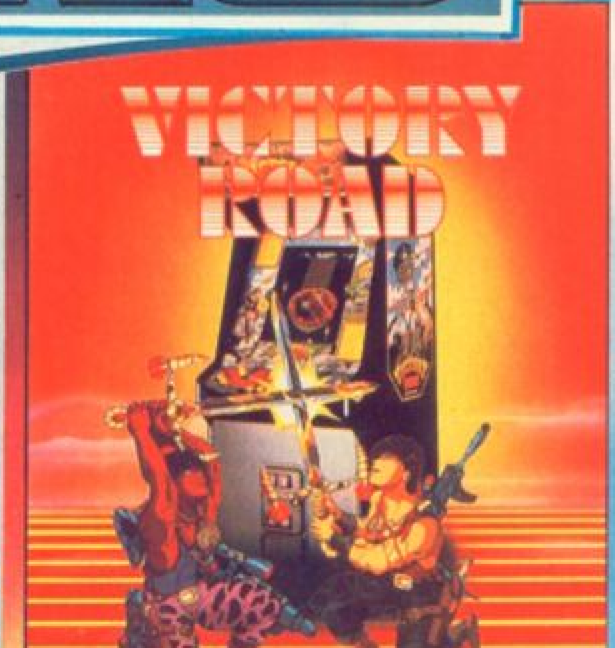
ADE



More arcade
magic from the
SNK label. Psycho
soldier is tipped for the
top as her thirst for action
and adventure takes her to even more strange worlds.

PSYCHO SOLDIER
SNK

PIONS



Having survived the
bloodsucking monsters of the first
phase, you progress on to the actual
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This is where the fun really begins. You will meet
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..the game

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INTERFACE

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Who's making the **millions?** We quiz the software houses...**National service** – the **bane** of European programmers...**Piracy** – now it's **jail** for the guilty.

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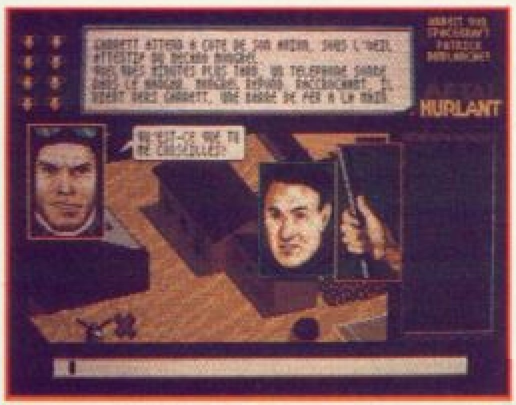
Comic quality from Infogrames' ***Crash Garrett***; bulging biceps vs. alien horror in ***Predator;*** plus more full-colour **future shock** for '88.



Zut alors, c'est *Crash Garrett.*

85 Letters

More of your **punchy prose** – but we don't take it **lying down**.

114 The Blitter End

We have the **last word**...as always.

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From **bouncing balls** to **alien death** – Christina Erskine presents the **definitive history** of the arcades.

The arcade – birthplace of the home computer entertainment.

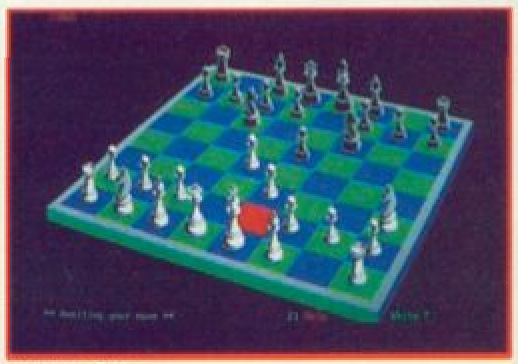
Are arcade games putting **zap** into the home computer industry, or **pap?** Andy Wilton reckons that coin-op game-style **seriously threatens** the development of true **computer** entertainment.

25 On with the smilies!

Dedicated arcade cabinets are threatening to **assault** our senses. Yes, we've come a long way since **Pong**, as Chris Jenkins discovers to his **cost.**

65 Brainstorm

Over **twenty games** that **challenge the mind** reviewed and rated by the ACE team.



Your move, Boris.

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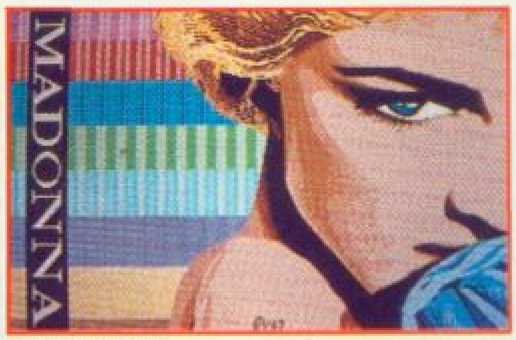
Can this package turn your ST into an **Amiga beater** with a staggering **4096 colours** to dabble and dither with?



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17 Light Tracery

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...AND SOUND

78 Music *without* MIDI

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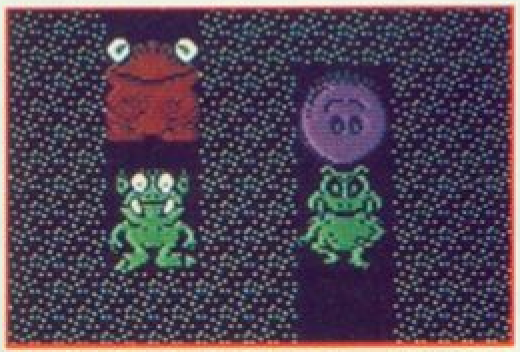

Page 41...Puzzling perplexity in Superior's *Bonecruncher*

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62 Updates

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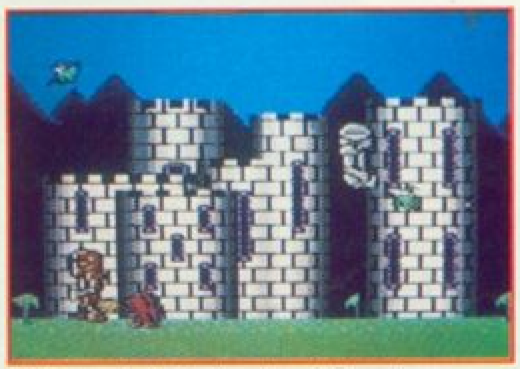

Infinite energy for bashing those towers in *Ramparts.*

93 Adventures

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BUY LINES

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89 Subscription

Now you can really keep your **finger** on the **button** – subscribe to the **hottest mag** in town *and* get a **free** joystick worth £14.95.

What a waggler! And it's *completely free* when you subscribe to ACE.

COMPETITION

22 Frame at last

We're offering you a **unique opportunity** – to edit your **very own page** of ACE, plus a free lunch, **25 red-hot games** for your machine, and the chance to write for the magazine on a **regular basis.**

ACE PINK PAGES

99 Buyers' Guide

Over **50 Great Games** presented in a no-nonsense, regularly updated guide that really sorts out the **crumbs** from the **crumpet**. If you're buying software, the shopping trip starts **here**.

120 Readers' Pages

Small **ads**, big **business.** Whether you're after **penpals**, a **PC**, help with **adventures**, or just the chance to contact **other readers**, these pages can put you **in the pink.**

Selling the industry for 10p?

There's nothing so heart-stoppingly satisfying as a quick blast on a state-of-the-art arcade console. Whether you're punching the pads in *Streetfighter* or leaning into the bends in *Super Hang On*, it's an experience that *Pong*-sters could never have imagined even in their wildest dreams.

But the challenge and involvement of a truly original, complex, well-designed computer game can be even more satisfying. The intricacies of *Sentinel*, the wit of Infocom, and the pleasing perplexities of *Xor* are typical examples. Games like these give the home computer industry a unique quality and a future full of satisfied gamesters.

However the 10p-a-go design concept of arcade games spills over all too often into computer entertainment and when the big league companies seem to concentrate so strongly on arcade licenses and game formats we've a good reason to start feeling uneasy. The success of this magazine in itself is a sure sign that people want **more** in their games - more originality, more long-term challenge, and a greater awarenes of the fact that not all games players are under five years old.

We don't want to lose the fun and frolic of the arcade scene, but if the industry isn't to remain confined to the 'kiddy market' then it **must** become more aware of the needs of the more sophisticated player.

• The ACE Team

ADVANCED COMPUTER ENTERTAINMENT

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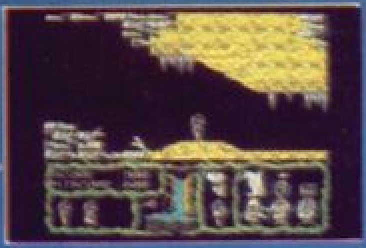
"GRAND SLAM" ENTERTAINMENTS
PRESENTS

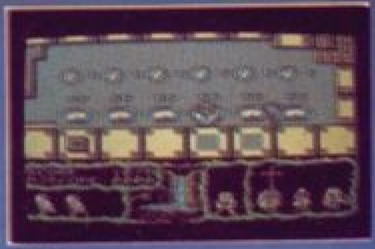
TERRAMEX

THE CARTOON ANIMATION GAME


Spectrum

Commodore

Atari ST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CRL DO THE DIRTY...

Not content with having women ripped apart by Jack the Ripper, the company are now releasing a game in which they're torn to shreds by a werewolf. And, of course, there'll be the digitised pics to prove it.

All this puts Headlines – the company's PR agency – in rather a tight spot. Naturally they're anxious to dissociate CRL from any hint of sexism or porno-violence, but the company's release policy seems to be making things rather difficult for them.

'It's eroticism,' claimed Nadia Singh, speaking for Headlines. 'Not pornographic in any sense. There is a little bed scene...Tastefully done...No nudity...' but the valiant lady admits that the main character is more than a little 'hairy on the inside' (as the film Company of Wolves put it) and has a tendency – not long deferred – to tear ladies to pieces.

The game (which we can't even bring ourselves to name) is written by Rod Pike. Shouldn't he really have learnt from the adverse publicity garnered by CRL's last release? Apparently not – 'He's a bit archaic, not a terribly progressive sort of person' admits Nadia. Presumably this means it isn't a very progressive sort of game, either.

So what's to be done, if anything? Electronic Arts, who distribute CRL's products, are quite clear that they 'cannot adopt any editorial stance towards the products we are supplied with'. But if retailers started refusing to stock them, then things might change: 'If that looked as if it was the case, we'd have to reconsider', said a spokesperson for EA. The moral's obvious, then – if you don't want these games on the shelves, don't buy them, and then the shops won't stock them...

NINTENDO DROP MATTEL?

In a shock turn-around, Mattel – the toy company responsible for the marketing of Nintendo games consoles in the UK – have dropped the product.

'Essentially we are a toy company and we have other brands we have to support', declared Michele Irwin, speaking for Mattel, 'Nintendo and Mattel are parting company.' Industry sources, however, suggest that the move follows pressure from Nintendo, who were reportedly unhappy with Mattel's performance with the product.

Naturally this has been vigorously denied by Mattel, but whatever the truth of the situation, the outcome is far from being a setback for the machine, which has sold nearly 9 million units in Japan alone and outsells its nearest competitor in the US by a staggering 900%.

That's because Mattel were never able to offer the software support the system needs to be successful. You can still only play 27 games on your Nintendo – the same 27 that were available when the product was launched. There are some stupendous pieces of software in Japan but the UK machine has a special chip in it that rejects any program not specifically coded for the UK market. The only hope is to persuade Nintendo in Japan to convert titles for us poor old Britishers.

Mattel's departure leaves the field open to NESI UK, a new company set up to promote the Nintendo with heavy TV advertising campaigns. It's run by the same people who took the machine to the top of the pile in America and will concentrate exclusively on supporting the system. It should also be able to get its hands on some of the red-hot games software everybody's playing in Japan and the US, but which has never appeared over here. 'They've done it in America and now they'll do it here. They going to wipe the floor with Sega', said a bullish Michele Irwin. Certainly the machine that boasts one of the best console games of all times, *Super Mario Brothers*, deserves special attention.

Super Mario Brothers – the game that launched 11 million consoles.

Stop Press!

Just as we went to press, we received details of a new range of 'computerised comics' - from Infocom, of all people. For further details of Lane Mastodon and his battle against the Blubbermen, see page 93.

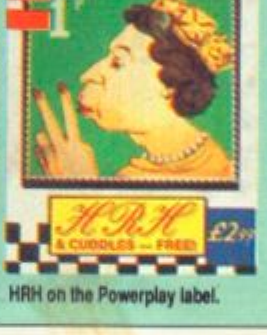
SMART EGGS OR HUMPTY-DUMPTY?

Can Smart Egg Software's new budget label, Powerplay, survive?

The label is a collaboration between the Eggs (previously a development house for Mastertronic) and Maynard International (responsible for the Top Ten budget range). What's intriguing about the company is that they plan a 50/50 mix of graphic adventures and arcade or strategy releases.

Adventures don't sell as well as arcade games, so can a budget label that relies on them for half its catalogue really make money? 'That's a pertinent point,' admitted Nigel Brooks of Smart Egg, 'One of our previous titles, Rigel's Revenge for Mastertronic, sold as well as any of their other titles, but that was an exception and of course we won't have such a high turnover as they do.' So what about the vital question of incoming cash? 'We'll try it out for the next three months and see how it goes', said Nigel, suggesting that if the adventures didn't cut the crumpet then they might reconsider and issue a higher proportion of shoot-em-ups and strategy.

That might be difficult, because although the company – who will rely to a large extent on submitted products to maintain a budget-style high output – have received 70 games for evaluation, 9 out of 10 of them are adventures. However, they're unshakeably confident about the future and it's certainly refreshing to see a company that doesn't rely entirely on forcing aliens to eat leaden death. Let's hope Humpty stays on the wall.



HRH on the Powerplay label.

LOGOTRON GO FOR ACE

For advanced computer entertainment, that is. The company that brought you *XOR* have taken on ex-Telecomsoft supremo Herbert Wright in a specific bid to attack the 'more mature' market.

'We believe a market of more discerning buyers already exists', declared Wright, 'and we want to be in a position to exploit new game opportunities that may arise from technological quantum leaps like ray tracing and CD ROM. We're avoiding emphasis on 8-bit machines or licensing, and aiming for a market that's more mature, more predictable, and has more spending power.'

Herbert Wright joins Logotron.

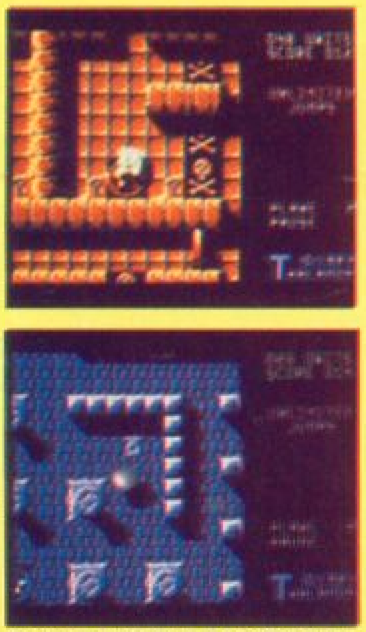
This policy also dictates keeping company overheads as low as possible, so that the company aren't forced to release much hyped titles in rapid succession but can concentrate on fewer (and therefore hopefully better) games.

XOR, got an ACE rating of 927. Let's hope the next one's just as good. Meanwhile it's nice to hear of company that thinks we're 'mature' and 'discerning', but 'predictable'? No SIR!

GAME OVER FOR EURO-CODERS

Imagine you're a successful programmer, in the prime of your games-writing life at the age of 19. You've just released a game that got an ACE Rating of over 900, and is selling very nicely. You're looking forward to a couple more big releases in the next 12 months.

Hang on a minute, though. Aren't you forgetting something? There's a small matter of your military service to consider. For the next 12 months, istead of coding through the nights, you'll be yomping through the tundra, cleaning toilets and peeling potatoes as your contribution to the nation's security.



***Quedex*: we won't be seeing another game like this until Stavros Fasoulas has finished his Finnish duty.**

Couldn't happen here? No, it couldn't, because we haven't had National Service in this country for over 25 years. But it's happening right now to programmers all over Europe. In particular it's happening to poor Stavros Fasoulas, programmer of the 934 rated game *Quedex*.

Despite his Greek name Stavros holds Finnish nationality, and just about the time you read this will be starting an 8 or 11 month stint in the military. How will it affect him?

'I really don't know what's going to happen. The 64 market could be completely different when I get out.' He doesn't think he'll get much work done while he's in: 'It's an all-day job – running, training, cleaning toilets...' In the whole period of his service, he'll get a mere three weeks leave.

It all makes you wonder what would have happened to some of our best-selling games if we still had National Service here. If David Braben had been square-bashing instead of programming there might never have been an *Elite*; if Richard and David Darling had been polishing bootees there might be no Code Masters; if Paul Woakes had to spend a year serving tea to the Captain what would become of Novagen? Thank God they abolished National Service.

PIRATE CLAPPED

Things are hotting up in the war against pirates – the first prison sentence for the crime has just been passed. The pirate sent to the brig is one Gerhard Wilhelm Martens, a German living in Torquay.

Martens got 12 months porridge after pleading guilty to charges of forgery, copyright infringement and illegally importing software in to the UK. His scam was to buy the pirated disks in Hong Kong (where they are freely, if illegally available) and the manuals in Taiwan. He then shipped the stuff over here and advertised his wares in the computer press, at prices slightly – but not outrageously – lower than other shops.

He wasn't rumbled until a purchaser realised that the heavyweight database package he'd bought wasn't all it seemed. He contacted the manufacturers, Ashton Tate. Enter FAST – the Federation Against Software Theft, the organisation set up by the computer industry to help wipe out piracy. FAST's co-ordinator Bob Hay went in to action, making sample purchases, followed up by a raid on the premises in the company of the Regional Crime Squad.

Martens was caught bang to rights; it took the FAST team two days to sift through the 200 pirated titles in the shop. Not only did they get the software, but they also found that he was pirating clothes; so if you suspect that the little alligator on the next shirt you buy looks a trifle odd, maybe it came from Torquay....

LIBRARIES

Martens' software business consisted entirely of business software. But what are FAST doing about games piracy? Bob Hay says that his brief does not cover individuals: 'I do not deal with one

Snippets...

Up and coming titles for your micro.

Except where stated, the games listed below should be available as you read this.

September

Activision

C64

£9.99 cs £14.99 dk

Spectrum

£9.99 cs

Amstrad

£9.99 cs £14.99 dk

The computer version of the board game where the players compete to construct a line from one side of the board to the other. Hailed in some quarters as the first new strategy game since Chess or Backgammon, *September* should be available now.

Thundercross

CRL

C64 £9.95 cs £12.95 dk

From the man who brought us the computer version of 'The Rocky

I COST £75000 – FLY ME

If you want to get the feel of racing around Donington on a Suzuki or diving in to strafe the enemy from your Harrier, look out for the new Super X simulator. This £75,000 gizmo includes a point-of-view video synchronised to the rocking a rolling of an hydraulic cabinet, large enough to seat 14 people. Those who've experienced it rate it very highly.

The machine has what its developers call 'ferocity levels', so that it can be set to give Granny a gentle burn-up round Silverstone or the youngsters a rather rougher ride.

Speaking for the company, Geoff White tells us that even at £75,000 sales are brisk, and he's confident that pretty soon we'll be seeing a Super X machine in just about every arcade and shopping centre in the land. One of the first to be installed will be at the Fleet Air Arm Museum at Yeovilton in Somerset, where it's hoped to run simulations of Harrier flights.

At the moment, you just get in the cabinet and savour the experience, but the company does hope to introduce an element of interactivity in the future – there are no dates as yet for this development, however.

ED IRONS

youngster copying a program and passing it on to another.' But where piracy is commercial FAST can – and does – take action: 'We busted a guy recently who was running a 'lending library'' he says. 'When we got there we found a thousand disks with over two thousand games on them.' The case is likely to come to court quite soon; we'll keep you posted on the outcome.

Bob Hay of FAST

Horror Show' – Jeff Lee – comes this fast and furious shoot-em-up. The Thundercross is, apparently, a sort of space 'hoover' that's doing a pretty good job of sucking up the Universe.

Power at Sea

Accolade

C64 £9.95 cs £14.95 dk

This action/strategy game is based on the WWII Battle of Leyte Gulf. The player takes the role of the U.S Fleet commander ordered to capture the Gulf from the enemy – within 96 hours. You've got a Battleship, cargo/troop ship and an aircraft carrier under your command, but watch out for the Kamikazes.

Venom strikes back.

Gremlin

Spectrum
£7.99 cs
C64 £9.99 cs £14.99 dk
Amstrad
£9.99 cs £14.99 dk
MSX
£7.99 cs

Or M.A.S.K.III if you prefer. This time the baddies have kidnapped Matt Tracker's son and are holding him in their moon H.Q. You play Matt and you're on your own for this multi-level space adventure.

Champ

Robtek

Amiga
£19.95 dk

This fast moving and realistic boxing game should be on the streets by now. It features authentic noises (nnnunff – nnnunff) and spectacular graphics. The player has a choice of four fighters from various weights.

Crazy football

Robtek

Amiga
£19.95 dk

This highly original arcade game has the player trying to dribble four balls through a maze – simultaneously. It's going to be a very tough game to master, but practice makes perfect.

Blackshadow

CRL

Amiga
£19.95 dk

This one or two player shoot-em-up takes place on the seemingly deserted asteroid Blackshadow (Ceres big brother?). It was up to you to save the earth from collision with this asteroid, but it wasn't until you got to the asteroid that your scanners revealed wave upon wave of attack craft. Surprise, surprise.

Loads of Midnight

CRL

Spectrum
£8.95 cs

This adventure game is a spoof of that all time classic *Lords of Midnight.* Take the part of Ludo, son Ludwig and race against the evil Baron Gloompork to reach the all powerful Ice Crown.

Coven

Piranha

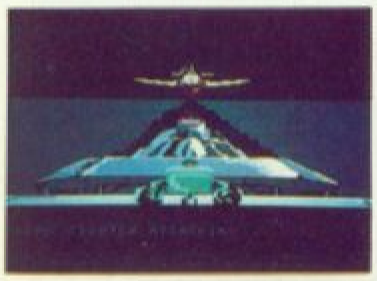
Spectrum
£9.95 cs
C64 £9.95 cs £14.95 dk
Atari ST
£19.95 dk

As a witch who's broken faith with your coven you must attempt to take the power from the twelve covens before All Hallows Eve arrives when they will be at the height of their powers. So get on your broomstick and prepare for trouble. This arcade-style game should be out around June time.

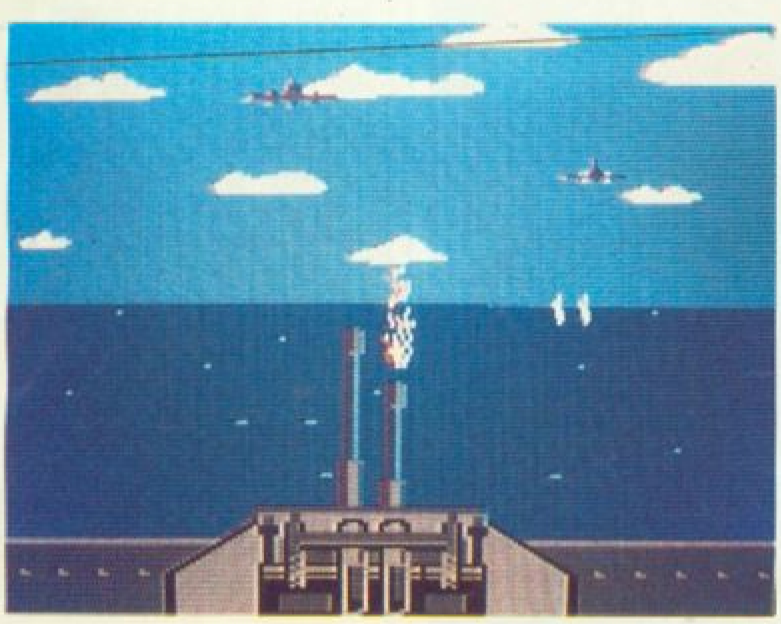
Escape to Normandy

Electronic Arts

C64 £9.95 cs £14.95 dk



The action takes place in France in 1944 and the player takes the role of Resistance leader Pierre Le Feu. The mission is to seize an armoured train that's loaded with priceless French art treasures and guide it through the enemy lines to safety at Riviere.



PROGRAMMER SPEAKS OUT

An important, soul-searching ACE exclusive...

Ignatius Goosebasket is famous for his fast and furious arcade games. He's been writing for the C64 for five years now under a nom-de-keyboard and this is the first interview in which he has given permission for his *real* name to be used. We approached Ignatius to discover how to write a game in a week – which a recent ACE survey suggests is the time you need to knock them up if you want to make money programming budget-style.

ACE: Right, Ignatius. Is there anything I need before I start to become a rich and world-famous budget games programmer?

IGGY: Yes, the first thing you need if you intend to write a commercially viable game in a week is a personal library of machine-code routines. My own took about four years to build up.

ACE: Is there an alternative to spending four years mastering machine code?

IGGY: Yes, the usual answer is to steal source code from famous games like *Uridium* and *Gauntlet.*

ACE: OK, I've got my routines. What now?

IGGY: You need an idea. All the best ideas are rip-offs, so the simplest thing to do is to look around the software scene until you are hit by a sudden 'inspiration'. If you've already written a game, do a sequel; same code, change the sprites around and add a few pull-down menus, that's the usual format. If you haven't yet written a game do one as 'homage' to an old favourite. My last mega-game was a sequel to a rip-off of an earlier homage to an arcade game (unlicensed clone). It made a packet.

ACE: Are programmers overpaid?

IGGY: Well, I certainly am. But then I overspend, so it tends to balance out.

ACE: Now, about this game...

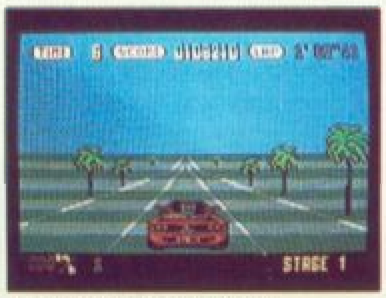
IGGY: All you need, basically, are a few pretty sprites, a collision-detection routine and some backdrops. Add a tuneful, err....tune, and some FX (Boom! Bonk! Whoosh!) and Bob's your TV game host! Game in a week!

SOFTWARE HOUSES '88 - BIG BUCKS OR BIG BUST?

So who's been making the big bucks? Who – not to put too fine a point on it – is making money hand over fist? An easy answer was provided by the news early in January that US Gold had sold a staggering 200,000 copies of *Out Run*.

That game was undoubtedly the biggest 8-bit seller of '87, so it's not surprising to learn that the US Gold group is the most successful purveyor of home computer software in the UK. In the few years since it was established, the company has grown from making a net profit of £175,000 on a turnover of £3,000,000 in 1984, to a net profit of £1,023,682 on a turnover of £20 million in 1987.

That's pretty good going, by any standards, but not everyone makes it to the top. Nexus went out of business just in time for Christmas, Mikrogen disappeared when distributors CSD went bust and Software Projects cut their releases down to the bone. It looks like the smaller independent software houses are either going to the wall or being absorbed into larger groups as 'developement houses'.



OUT RUN – biggest seller of 87-88?

8-BITS DEAD?

The problems have come about largely because of the uncertainty over the full-price 8-bit market. There's a general feeling that you and I are no longer willing to go into a shop every week and pay 10*quid for a Spectrum or 64 game (unless it's some mega-arcade-licence). We'll spend £1.99 without batting an eyelid, but full-price just frightens us off.

Derek Brewster of newly-formed budgeteers Zeppelin (see box for more about them) puts it this way: 'There's a lot to be said for full-price software at Christmas, but a lot of the time it's dead.' Herbert Wright of Logotron – publishers of *XOR* – echoes this view in rather stonger terms: 'If you haven't got a licence 8-bit is dead. Unless you're budget, of course.'

The Big Boys

Just who are the big boys in the UK software scene? Of the home-grown houses the **US Gold** group is by far the largest; its major shareholders Geoff and Anne Brown not only have US Gold itself, **Go!** and major distributors **Centresoft**, but have fingers in other pies as substantial as Ocean and **Gremlin**.

Ocean and **Mastertronic** are the next indigenous big boys, but the picture is slightly muddied here by **Virgin**'s recent acquisition of 45% of Mastertronic – which probably puts Virgin up into the software big league.

Telecomsoft – Rainbird and Firebird – are the other key players. After a shaky start (they were reputed to have paid over £1,000,000 to buy Beyond and another large amount for Odin) they have now gained a large segment of the UK market.

Chequebook software development seems to pay off – especially if you've got a company as big as British Telecom behind you.

A dark horse are **Code Masters**; they haven't released any figures yet, but if the charts are anything to go by they are doing quite nicely, thank you. Not yet in the big league, but ones to watch.

But the UK companies haven't got everything to themselves. **Activision** came here several years ago and, after a shaky couple of years, are now performing well. **Electronic Arts** are big in the States and seem set to be big over here too; they're looking for more labels to handle and have recently signed an agreement which means their software will now be appearing in Boots – the single largest retailer of entertainment software in the country.

US GOLD

No, they're not a rock band – but this US Gold promo material does make a nice connection with 'lead singer' Geoff Brown's prior existence as music teacher and part-time rock musician. Only four years on, the company he started is the single biggest player in the UK games market, bringing us a host of stateside hits and coin-op and film licences. The whole group comprises US Gold, Go! and Gremlin on the software side, and the software and hardware distributors Centresoft, who supply games to Boots and other retailers.

SHARON GORDON
TRACEY WARDLE
DAVE PARKINGTON
TIM CHANEY
JERRY HOWELLS
GEOFF BROWN

BUDGET TAKES ITS BITE

According to Rachel Davies of Mastertronic – and if anyone ought to know, it should be her – budget software now accounts for 60% of the market. She too suspects that full price 8-bit software is in terminal decline.

The evidence for the success of budget software lies in the results of companies like Mastertronic and their rivals Code Masters. Mastertronic's profits of £1.2 million last year were 50% up on the previous year's – because of games software. Code Masters haven't released figures as yet, but you only have to look at the number of their games in the charts to see that they can't be doing too badly; the company's Bruce Everiss says they sold 300,000 games in December '87.

Clearly, there's a whopping big market out there for budget games, and it's probably going to increase substantially in '88. But what of full-price software?

16-BITS GOOD

While everyone agrees that the days of the 10 quid 8-bit game are numbered, there is a widely-held belief that 16-bit is a growing market for full-price software; the machines are relatively new, and customers seem willing – for the time being, at least – to pay 15, 20 or even 25 quid for games.

And here might be the place where the small software house, even the lone individual, might make a comeback in the games industry. Herbert Wright, again, on a recent Atari User Show: 'It was like an old ZX Microfair. All the small guys were there and I hope they survive. They bring much-needed originality to the industry.' Amen to that. Mastertonic, too, see 16-bit software as an area of growth in the year ahead – in fact, just about anyone you care to talk to sees 16-bit as the shining path leading to sales and profits.

WILL THE GAMES INDUSTRY SURVIVE?

Will the rich get richer and the poor get poorer in 88? Probably. What seems likely to happen is that the budget companies will increase their share of the 8-bit market. The big boys with the big money for the big licences will continue to coin it from coin-ops and films. And the smaller, independent houses?

Mergers and marketing deals seem to be the order of the day. Rachel Davies doesn't think that many houses will actually go bust this year; 'software houses are more professional than they used to be.' But she does believe that there will be 'Mergers, a polarisation around the big houses, with the small houses becoming development teams still publishing under separate labels.' Let's hope that it doesn't mean they'll just be turning out coin-op clones to order.

Derek Brewster surrounded by the Zeppelin crew

ZEPPELIN TAKE OFF?

Budget software already has 60% of the market, and that figure may well rise this year. A good time to start an 8-bit software house? Derek Brewster obviously thinks so, since that's what he's done with Zeppelin.

The company plans to bring out four titles per month throughout this year across the popular formats, at a price of £2.99. Derek Brewster says they need to sell 10,000 games per month to break even, on the basis of the company receiving around £1.17 per game sold.

Will he make a fortune? Zeppelin hope to sell 20,000 games per month and to have snatched a 5% share of the budget market by the end of '88. That is, they hope to be doing business to the value of £2.5 million.

What's in a game?

Just how much does a software house actually make out of a game? Although you buy it in the shop for £9.99 or £19.99 the software house obviously doesn't get all of that.

First of all they have to give a discount to the distributors who are getting onto the retailers' shelves. The discount is usually of the order of 55%, so a £9.99 game will bring the publishers around £4.50.

The advertising and packaging of the game will eat up a good proportion of that. Then you have to pay your programmers/graphic artists/musicians/development house. And of course there are the normal business costs of renting space, phone bills, travels etc. etc.

Out of that original £9.99 there might not be much more than £1.50 – £2.00 left. If you're only selling a few thousand of a game then you're not making much money. Obviously, US Gold have done pretty well from *Out Run*; they must have taken in around £900,000 from that one game alone – but even there you have to bear in mind the substantial costs of licensing the coin-op and the reputed six months development involved.

Unless you have the resources to buy licences and promote your games heavily, it's hard to sell a lot of full-priced games. No wonder then that the smaller houses are cutting back on their releases and turning to development for their bread and butter.

ELECTRONIC ARTS

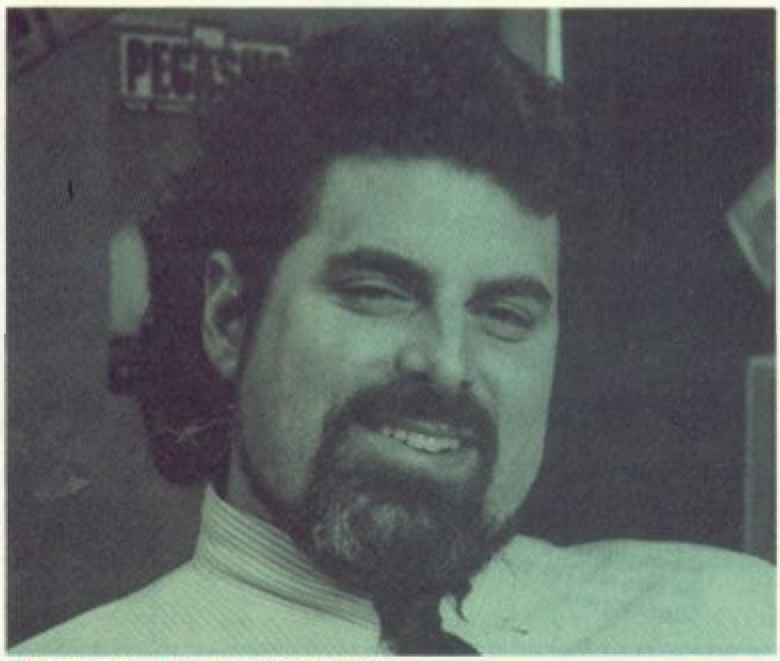
One of the most intriguing developments in '87 was the establishment in the UK of the European arm of EA – largest US publisher of entertainment software.

EA is not a public company, so they're not obliged to divulge profit (or loss) figures. Their latest turnover though, for the year ending March 1987, was $32 million – and it's more than likely it will be substantially higher in March '88.

EA's European boss Mark Lewis, unlike many other people in the games field, is optimistic about the prospects for 8-bit software – EA's, at least: 'It's still a healthy market, based on sales of *Chuck Yeager* and *Skate or Die*', he says. The implication being that the games will sell well at full price if they're good enough.

For the future, EA are investing in CD and interactive video, but Mark Lewis thinks it unlikely that we'll be able to buy anything at a reasonable price until Christmas of 1989.

And for 1988 we could see some of those independent software houses signed up by EA as 'associate labels' – as CRL and Martech have already done. 'We're still looking for associates', says Lewis,'and it's more than likely that we'll sign some more software houses in the new fiscal year.'



EA's Mark Lewis – Director of European Publishing

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Rescue the hostages from impending death. On land, at sea and from underground caverns.

This game software has been manufactured under license from Broderbund Software, Inc.
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The famed arcade hit ZAXXON can now be enjoyed in the privacy of your home in 3-D scope. Evade obstructive walls and the laser barrier. Advance onward to destroy the enemy – Requires 3-D glasses.

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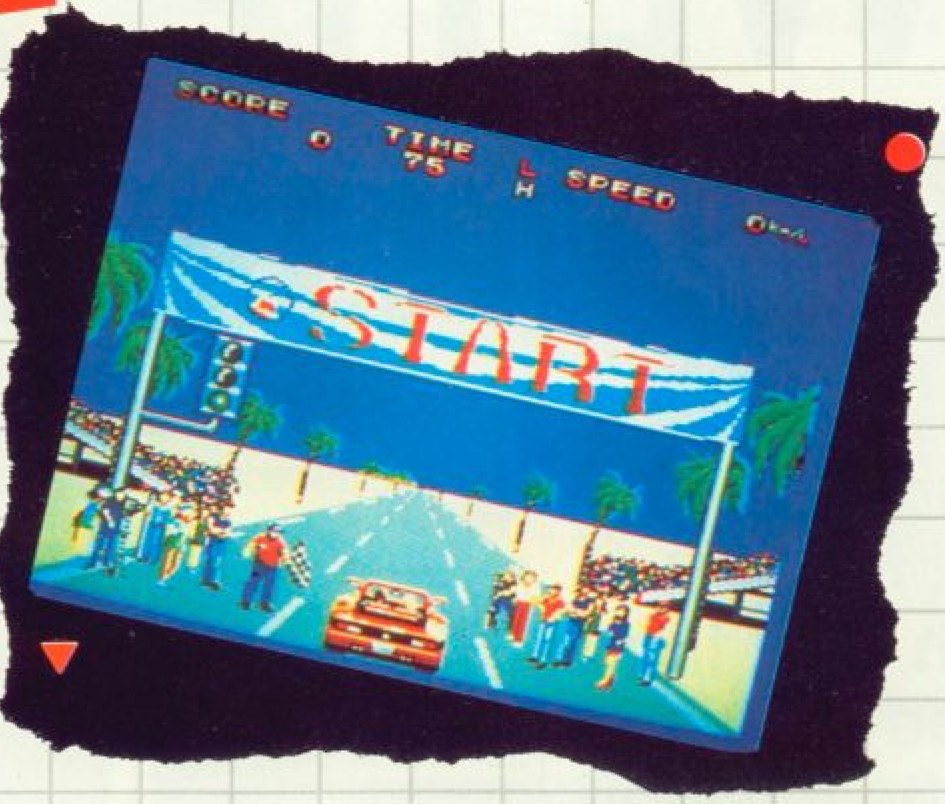
Games from £14.95 Master System £99.95, Light Phaser £44.95, 3D Glasses £39.95

The Ultimate Games Machine

OUTRUN™

Thrill to the gripping, realistic pace of this breathtaking Racing Car Adventure!

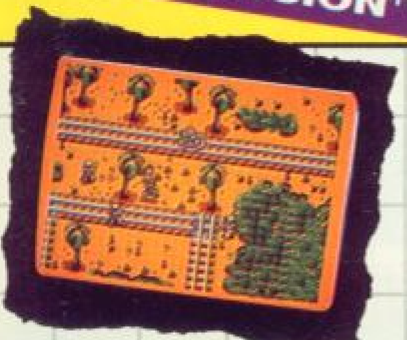


Enjoy the thrill of speeding over the world's famous roads in this Racing Car Adventure. Realistic effects as lane changes, uphill and downhill terrain, sudden curves and many more exciting effects.

AVAILABLE NOW

Screen shot taken from arcade machine.

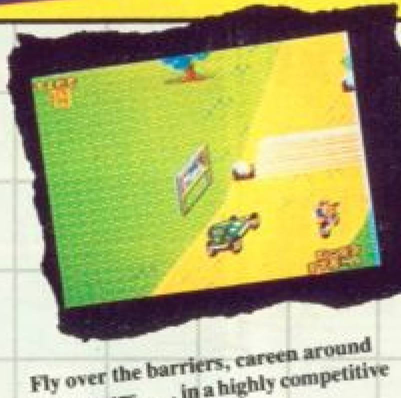
RESCUE MISSION™



Your comrades have been trapped by enemy troops, your mission is to take an armoured buggy in to rescue them. Fast action packed shooting game requiring a skilful eye and a steady hand. Requires light phaser.

AVAILABLE MARCH.

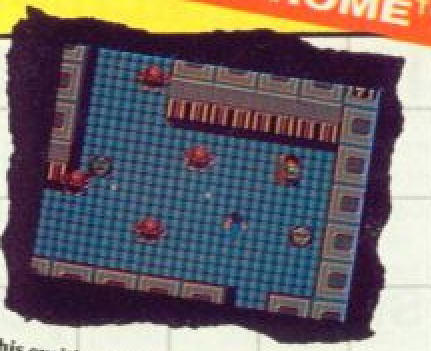
ENDURO RACER™



Fly over the barriers, careen around the corners . . . in a highly competitive race against the clock.

AVAILABLE NOW.

ALIEN SYNDROME™

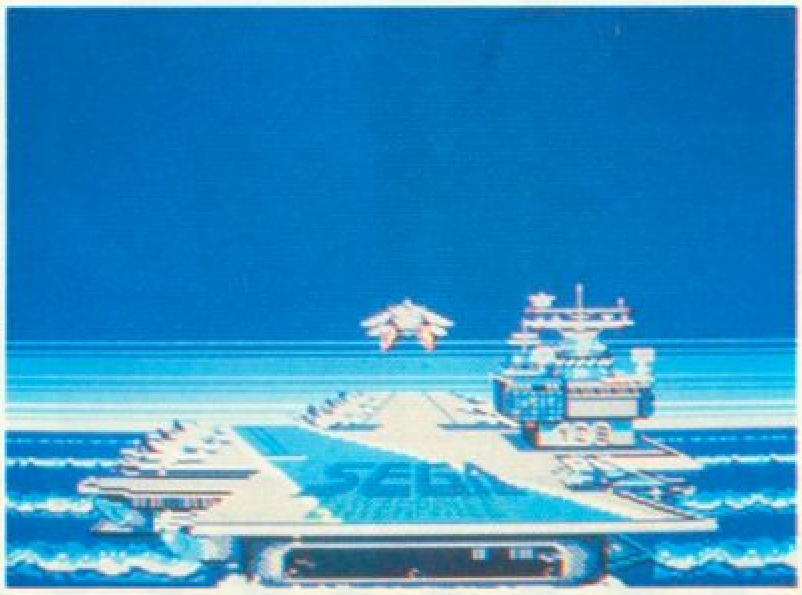


This exciting strategic space fighting game will require you to rescue your comrades from an alien spaceship, requires lots of skill.

AVAILABLE MARCH '88.

PLUS 30 OTHER EXCITING TITLES

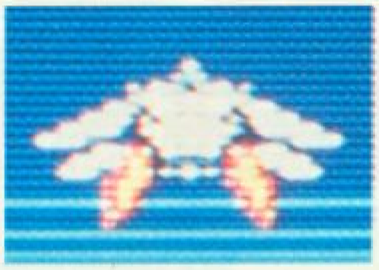
Available from leading stores of Woolworths, John Menzies, Toys R Us, Kids Store, Toy and Hobby, Harrods, Selfridges, W.H. Smith, Virgin and your local computer dealers.



AFTERBURNER

Sega

Sega's titles for their own Master System have been a bit of a mixed bag, all things considered. While *Out Run* and *Choplifter* have been very impressive indeed, *Enduro RacerS* change of perspective from the original was little short of a disaster. If this shot's anything to go by they've kept the viewpoint where it belongs in the forthcoming *After Burner* – right behind your plane. How good the game looks once it's moving is another matter – the coin-op original sets a cripplingly high standard, so don't expect a pixel-perfect copy!



SEGA: The mission begins as your F-14 Tomcat leaps skywards.

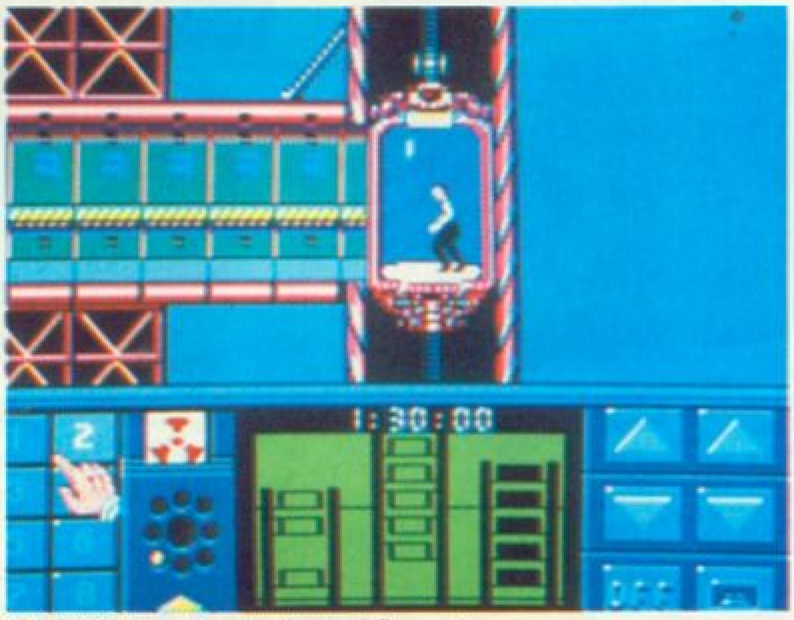
WE HAVE IGNITION!

This month's software Sputniks should go up like rockets: they're on the launch pad, fired up and ready to blast off! If the mission proceeds as planned they'll achieve orbital insertion in ACE next month before splashing down at a shop near you – but it could take months of computer time to fully analyse the data!

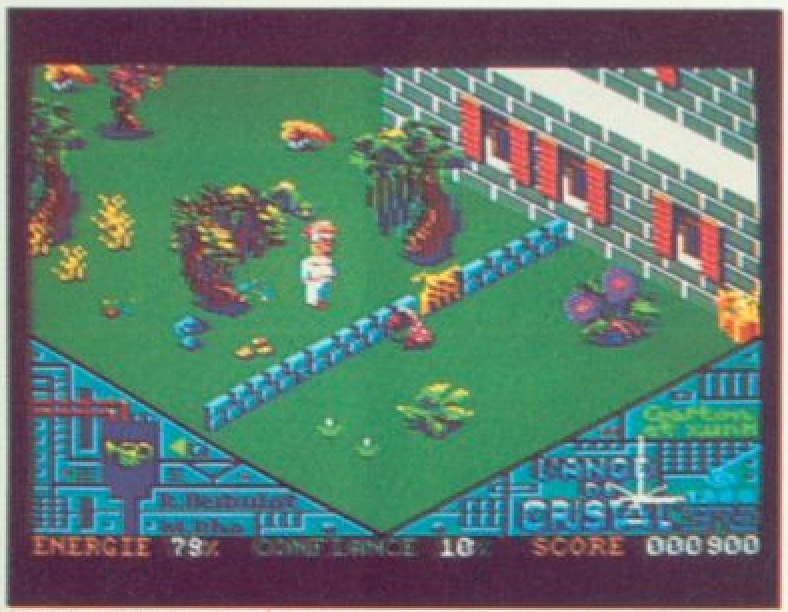
IMPOSSIBLE MISSION II

Epyx/US Gold

Elvin Atombender's up to his old tricks again - world domination, that kind of thing - so you'll have to somersault your way through his robot-infested HQ searching the furniture. Obvious really, innit. As in the original game your task entails a great deal of hard work sussing robot movement patterns, timing jumps and experimenting with lifts and moving blocks. The central puzzle is different – this time you're trying to collect the security codes that'll get you into Elvin's hideout – but IM fans of old should catch on pretty fast. Epyx are still putting the speech in at time of writing: check out next month's ACE for a review of the finished article.



ST: In the lift. This muzak tape will self-destruct in five seconds.



Get Dexter II – Could this be as big a hit as the original?

GET DEXTER II

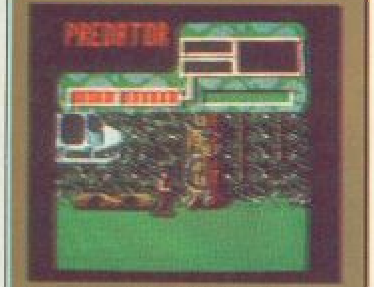
Ere/Infogrames

Crafton et Xunk went down a bundle with Amstrad owners in Britain, but the chances are that most of them didn't even realise it. On this side of the Channel, you see, the game was marketed by wargame specialists PSS under the name *Get Dexter*. Now Infogrames are gearing up to bring us the Ere Informatique sequel, and as you can see it does look rather good. Once again you control the heroic android Dexter (Crafton) on a bizarre quest to the planet of Kef, with plenty of nasties to contend with and only the friendly little podocephalus Scooter (Xunk) for help. Those Infogrames people are still busy translating the game and its accompanying literature, but ST and Amstrad CPC owners should be able to see the results very soon. Chic alors!

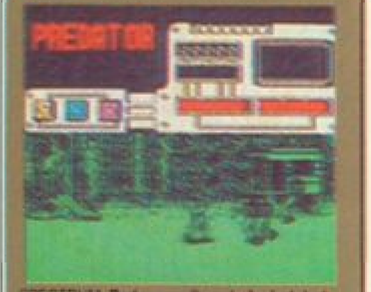
PREDATOR

Activision

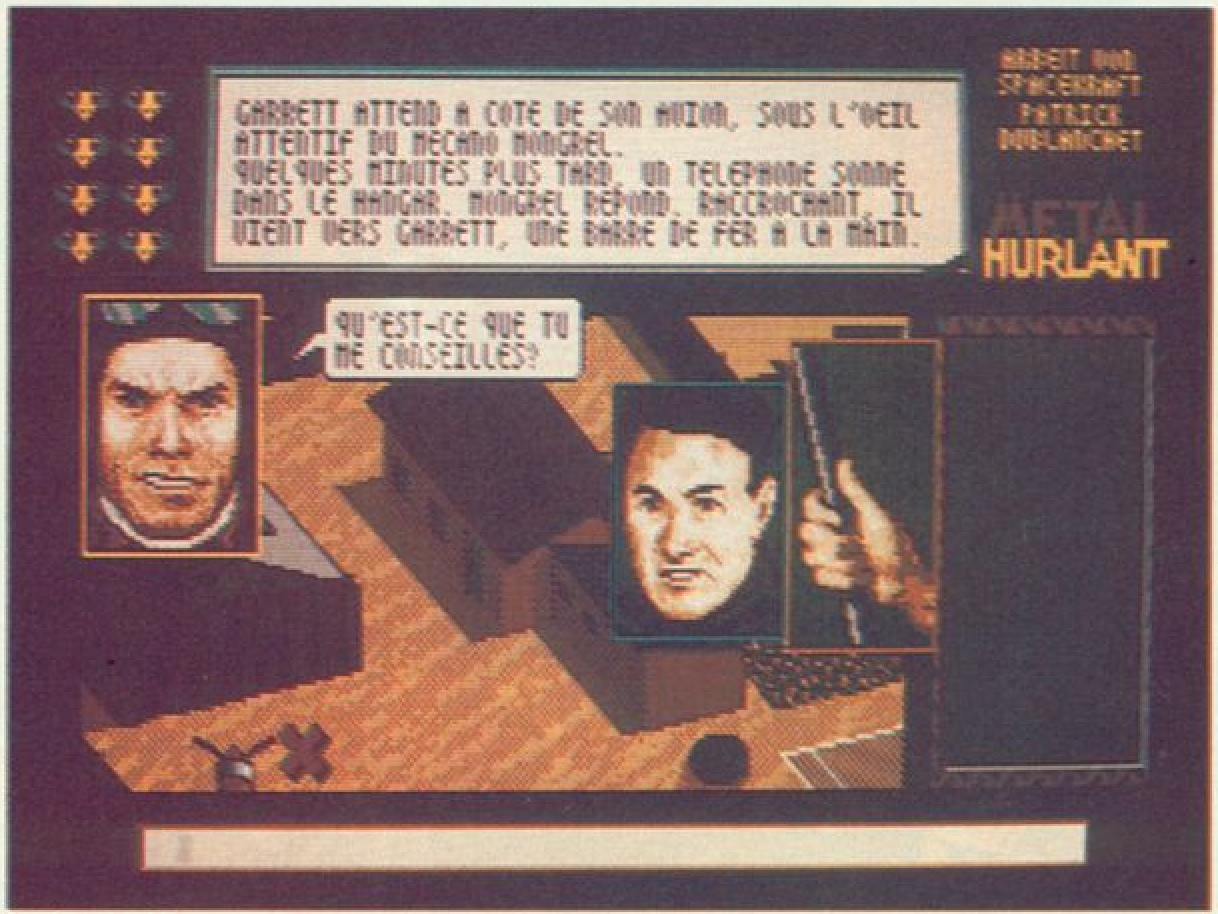
Film tie-ins have a dodgy history in the software market, but Activision seem to have hit on a winning formula: go for movies with aliens in 'em. Whether this next movie licence will top the charts for them is still uncertain, but it's got all the elements: mercenaries kill terrorists, alien kills mercenaries, mercenary commander and alien have grand finale showdown. The commander in the film is none other than Arnie Schwarzenegger so the celluloid slug-out is (presumably) something of a foregone conclusion, but on the micro version things should be a good deal tougher. *Predator* the game is due for planetfall real soon now, so watch the skies!



C64: If you were an alien, would you mess with this man?



SPECTRUM: Bad guys pile out of a hut, but Arnie's more than ready for them.



GARRETT ATTEND A COTE DE SON AVION, SOUS L'OEIL ATTENTIF DU MECANO MONGREL.
QUELQUES MINUTES PLUS TARD, UN TELEPHONE SONNE DANS LE HANGAR. MONGREL REPOND. RACCROCHANT, IL VIENT VERS GARRETT, UNE BARRE DE FER A LA MAIN.

QU'EST-CE QUE TU ME CONSEILLES?

Crash Garrett on the ST – some great music, great graphics, and attractive cameo portraits.

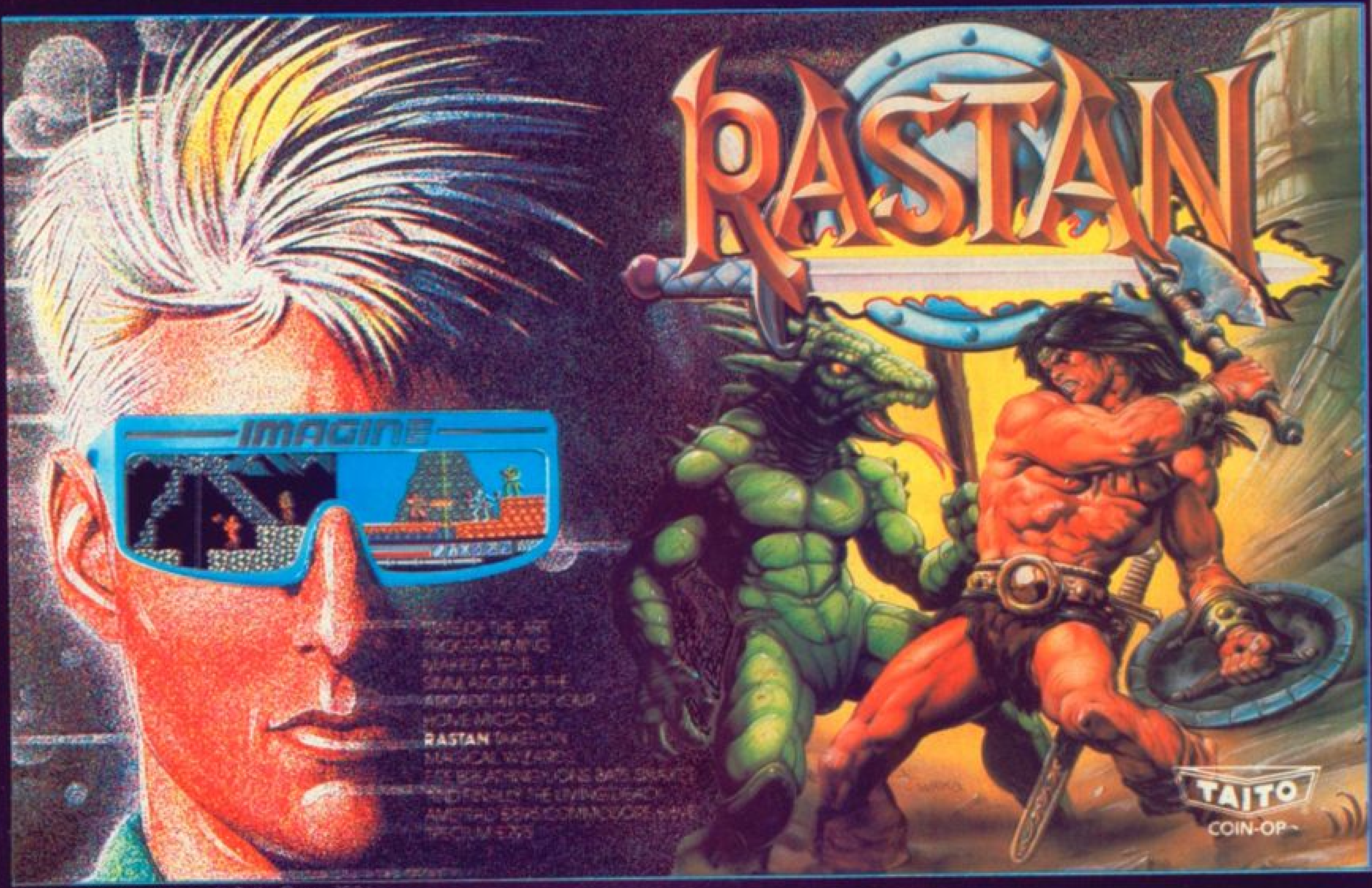
CRASH GARRETT

Infogrames

Er..well..Ere Informatique, actually. Those French laddies who brought you *Get Dexter*, *Bubble Ghost*, and *Phoenix* are now trying to woo you with comic-style adventure under the aegis of renowned French periodical Metal Hurlant. Fans of Palace's *Stifflip and Co* should love this one – the action is outlined in a scrolling text window above the main graphics display, with constant overlaying of animated faces as the various characters bof and biff their way through the plot, in which air ace Crash Garrett has lost his girlfriend Cynthia to the evil Baron Von Krul and must get her back.

Limited text input but lots of visual treats as cameo portraits scroll, 'peel off', dissolve, and slide about the display. As a character enters, his picture sneaks smoothly on-screen – type ATTAQUEZ and watch him slip down out of sight beneath the weight of your power-packed punches. There's even a degree of animation showing the emotional life of those involved – smiles, grimaces, snarls, and shrugs give you some idea of how your brief two-word text inputs are bing received. Stunning music on the ST version, superb graphics all round, but some doubts about the long-term interest and definitely not one for those keen on 100% arcade action. Keep your eyes peeled for the full review of the English version, coming soon.

I M A G I N E Y E S A T I O N



RASTAN
IMAGINE
TAITO
COIN-OP

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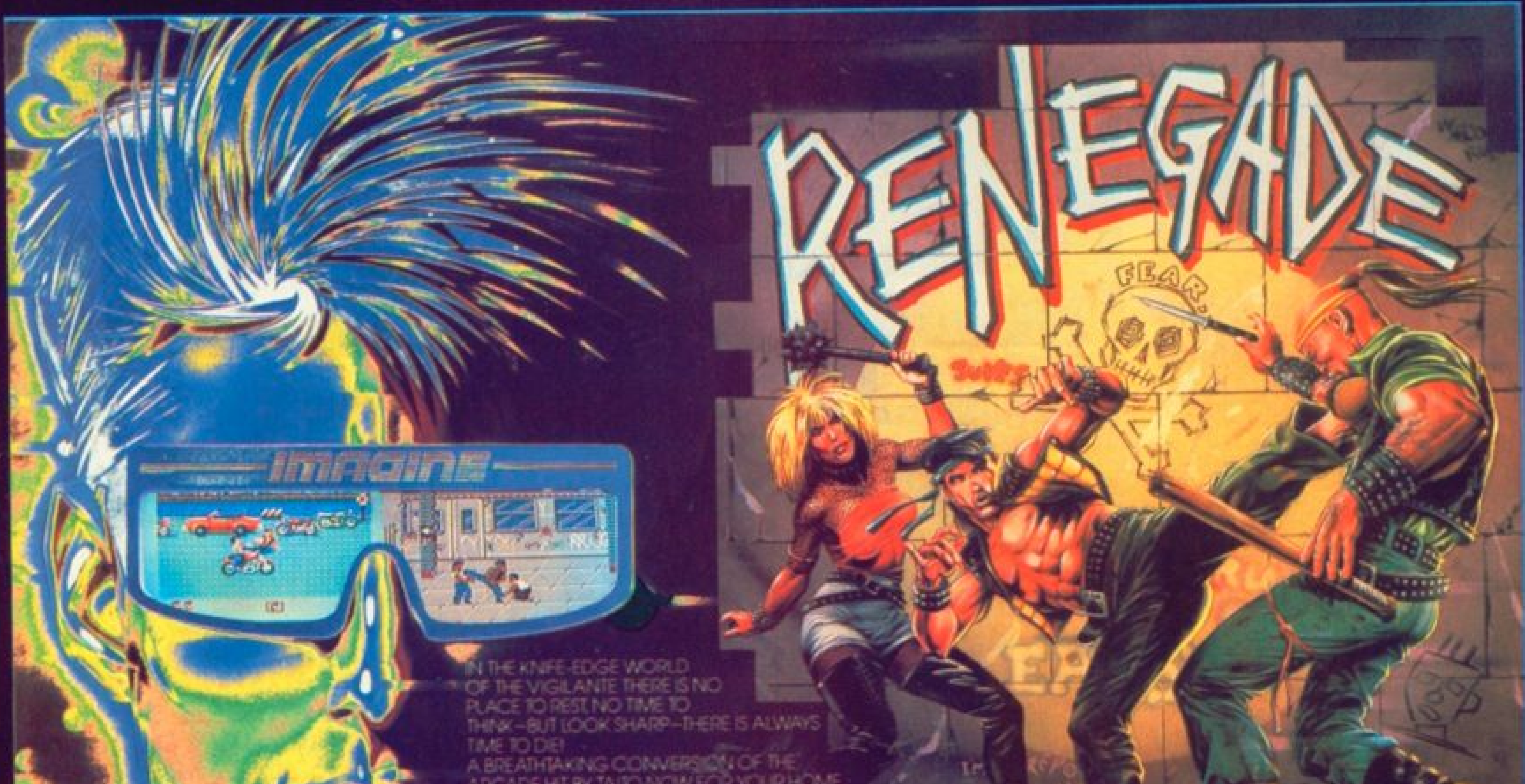

RENEGADE
IMAGINE
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TAITO
COIN-OP
Imagine
..the name of the game

IN THE KNIFE-EDGE WORLD OF THE VIGILANTE THERE IS NO PLACE TO REST, NO TIME TO THINK—BUT LOOK SHARP—THERE IS ALWAYS TIME TO DIE!
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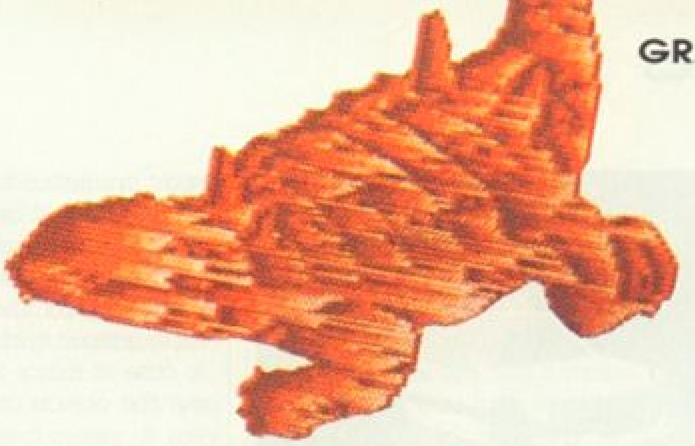


LIGHT TRACERY

The second instalment of our series on graphics technique finds Brian Larkman trying out a bit of light tracery.

In the first part of the series we skipped the formalities and went straight into the techniques involved in showing the bulk of three-dimensional objects, surface texture and light direction. This month we're going to pause for breath and take a look at some of the more basic skills involved in creating computer art.

Technically, the first thing that should be considered in a drawing is the structure. Visualising the fundamental structure of an object is quite difficult, and getting it drawn is even more so. Learning the skills required takes a lot of practice so, for the moment, we are going to cheat, and copy objects directly by 'hand digitising.'

There is a number of techniques that can be used to copy a picture, but the simplest one is **tracing**. All of the pictures illustrating this article were produced initially by tracing images from magazines. The method used is described in detail below, but first it's worth discussing the process of selecting images, since this is really the very first job once you have decided what you want to draw.

Fortunately for the aspiring graphic artist, we are surrounded by images suitably processed for us to copy. Newspapers, magazines, colour supplements, picture books, posters, postcards, family photos – the list of good sources is endless. If you intend to work quite often with a computer paint program, it is worth making a collection of images that interest you. Before sitting down at your computer, scan through all of the suitable pictures and select those that are closest to what you want.

Initially you should just choose one object or complete picture to copy, though whatever you choose, try to make it something simple; unless you have a very sophisticated, high-resolution system, most attempts at complex images tend to look rather messy. As you get more practiced you will want to take bits and pieces from various sources and paste them together. In that case, the two most important things to look out for during picture selection are scale and orientation.

SCALE AND ORIENTATION

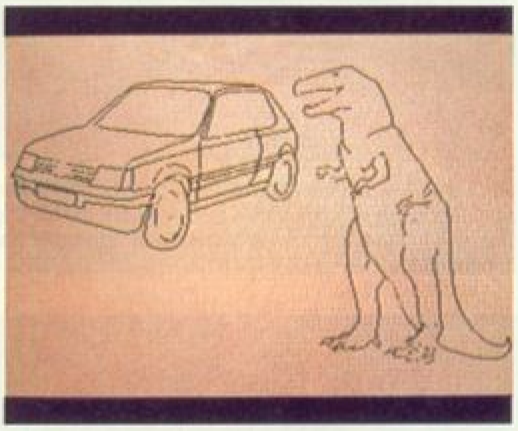
In both our main pictures, the aim was to mix together widely differing images. For this to work, T. Rex and the Car, for example, needed to be approximately the right sizes and at *exactly* the right angle and view-

Hand Digitising

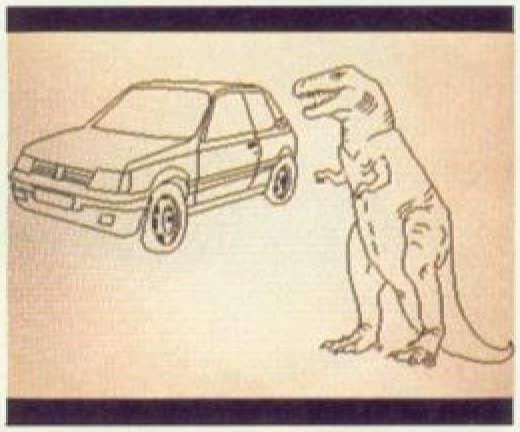
Transferring the image of any object (or sound) from the outside world to a computer environment is called digitising. Most parts of the physical world appear to us as gradual changes of shade or tone. This continuous variation is known as analogue. A computer can only deal with variations in definite steps, each of which can be very small, but always numbered, and therefore known as digital. The easiest and most well-known way of digitising an image is by passing an analogue video signal through a hardware Digitiser. This produces an approximation of the original made up of dots. Nevertheless, it is equally possible, though a lot more work, to 'hand digitise' an image by carefully copying it. A skilled artist can do this 'by eye', but most will at some time take the short-cut and trace an image.

GT REX

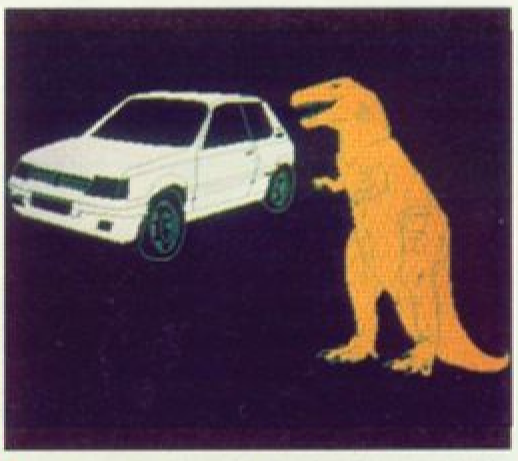
4 colour mode – could have been produced using 8-bit Advanced Art Studio but was actually created in Deluxe Paint 2 on an Amiga.



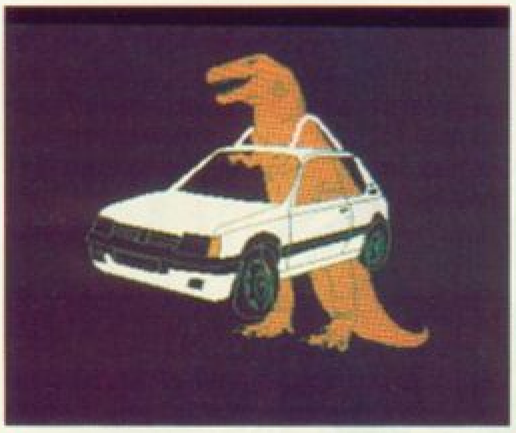
1. Initial tracing. Note the gaps and lack of detail..



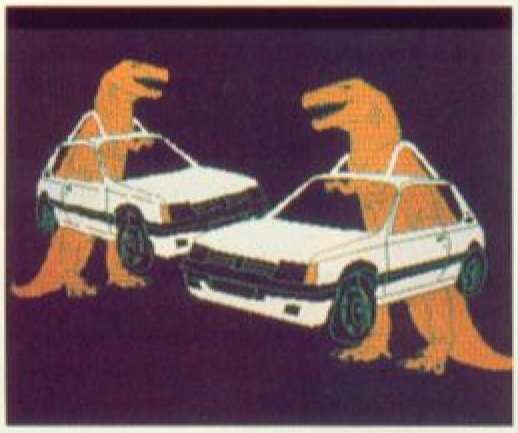
2. Boundaries are now complete (no leaks!) Details added. Both of these outlines are saved as windows.



3. Initial colouring of objects. More detail could have been added at this stage using colour fill patterns, but most of the modelling is achieved by the lines. Saved as 2 windows.



4. Two images are superimposed and extra details (shoulder straps) added. Saved as one window.



5. Complete foreground composition. The original (GT Rex) is scaled down slightly (by defining a smaller 're-scale window' and mapping the original to it in AAS). It is then 'mirror flipped' horizontally. This smaller window is also saved.

point in relation to each other. Size (scale) is easier to adjust on the computer after copying, provided your paint package allows scaling (if not, see the box on how to draw using a grid). Orientation is usually much more difficult to change, except in the specific case of mirror images. If possible, cutting out the objects and placing them together gives a better idea of how the picture will work; otherwise, try rough tracing or sketches. It may seem laborious, but it's hard to over-emphasise the fact that this early preparation is what makes a good painting.

The next stage is to copy the objects you have chosen, either by tracing or with a grid. Both these techniques are described in boxes.

Tracing

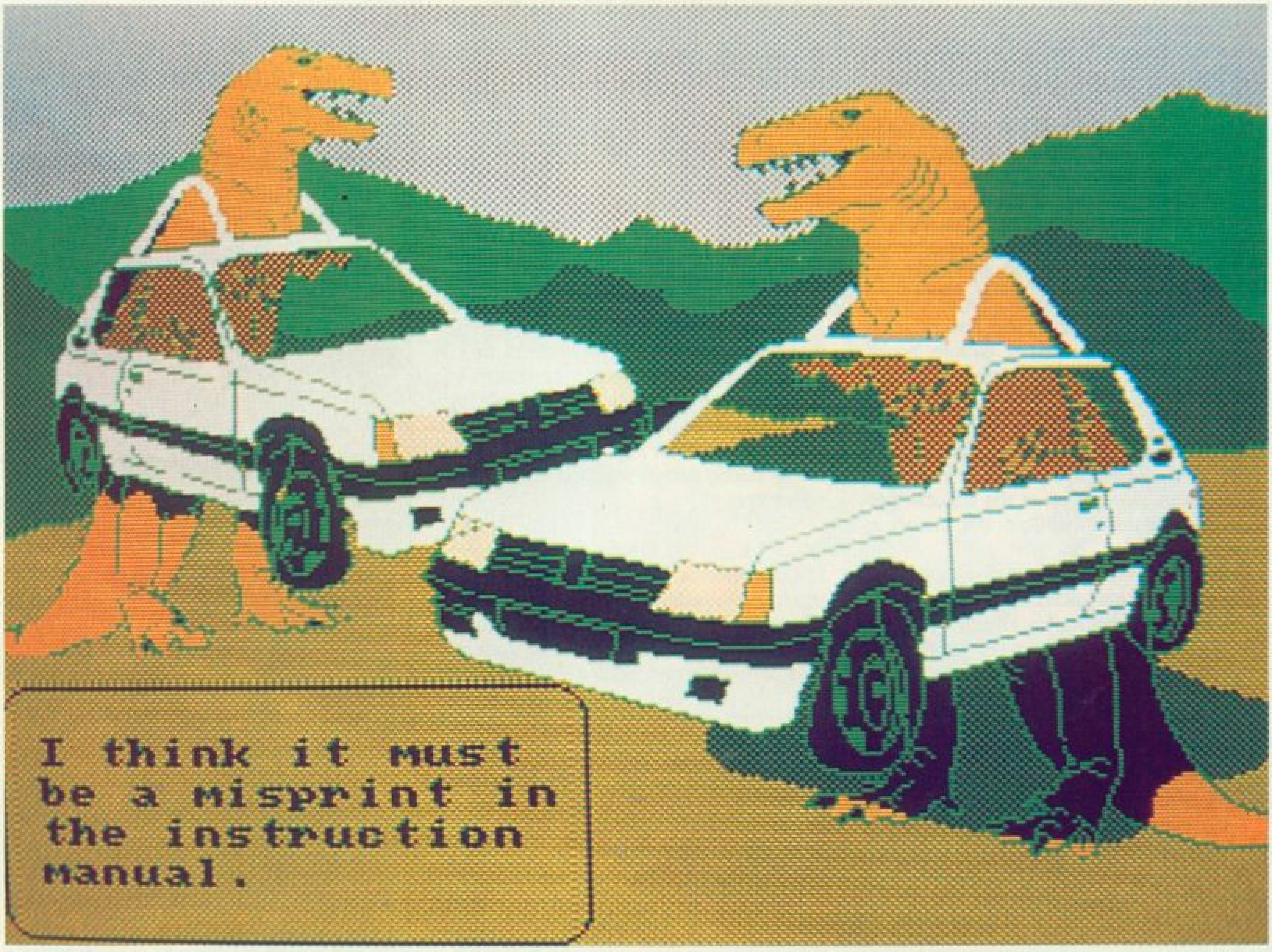
By far the easiest hand method of digitising an image is by tracing it. The tracing 'paper' needs to be completely transparent. Some form of clear acetate such as overhead projector transparencies is most suitable. They can usually be obtained from a good model-making or stationery shop. A fine-nibbed waterproof, permanent felt or rollerball pen is also required. Red or green are better than black, allowing the lines you draw on screen to show through.

Trace the image carefully – following all 'limbs' of the object, not just around the edge – but do not be tempted into drawing too much detail. If there are definite colour changes, trace those too. If colours change gradually, try to pick out a line that divides them. The final tracing should look like 'painting-by-numbers'.

One great advantage of thin acetate is that it should stick to the monitor screen by static alone. Position the tracing on-screen in the correct orientation. If static is not enough, use 'blu-tack' or masking tape.

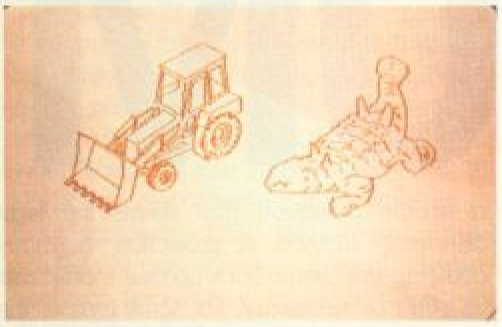
The copy is made using rubber-banded line or polygon – or, for circles or ellipses, the suitable tool. It is usually best to select an off-white screen and a distinctive line colour (different from the tracing pen). Starting at the top and working down, follow the shape of the traced lines with short rubber-banded lines. With a little practice it is possible to produce a very good copy, even with quite tight curves. You may find it easier to line things up if you keep one eye closed.

The final copy should look something like the first G.T. Rex outline above. SAVE IT IMMEDIATELY. There will be lots of gaps and wrong lines, but these can be corrected with magnify. The fine details of the line drawing can be added at this stage.

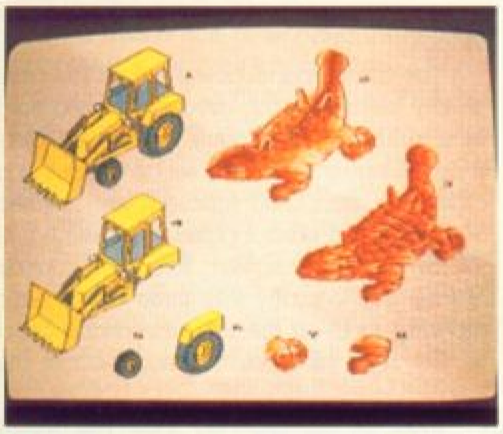

I think it must be a misprint in the instruction manual.

6. The final picture. A simple background is composed first. The smaller window is pasted down, followed by the original larger window slightly overlapped to show depth of field. Shadows are then painted in with wash texture as described last month.

NUCLEAR FAMILY



1. JCB and Dinosaur – initial traced copies after tidying up.



2. Components:
(a) JCB filled 'painting by numbers' style
(b) Dinosaur – finished version.
(c) Dinosaur – initial dithered-fill version.
(d) 8 bits used to paste up Diggersaurus.

Once the detailed line-drawing has been made, the real work is over. However, it cannot be stressed frequently enough to SAVE YOUR WORK OFTEN. Keep a separate copy of the line drawing, as you may want to use it in the future or make a fatal mistake with the filled-in version.

What you do next depends on how you like to work and the subject-matter. It may be that the whole picture can now be assembled as a line drawing and then filled in with colour and texture. In most cases, it is better to finish each object completely and then assemble the picture. There are several reasons for this. Firstly, complete objects can be stored separately in 'libraries' for use in other pictures at a later date. Secondly, some objects may overlap each other, or be multiples of one image and it makes no sense to colour each one individually. Thirdly, you may wish to try a variety of compositions and backgrounds before finalising the layout. ●

Changing Scale with a Grid

If the software you are using will not allow scaling, it is possible to copy an image using a grid. Draw a pencil grid over the original picture, dividing it up into a reasonable number of squares (at least 8 x 8). If you do not want to draw directly on the picture, then use an acetate sheet. Using the grid-lock tool of your paing program, create a grid of similar proportions to your drawing, but at the new scale (e.g. x 2, x 4, x 0.5). Working systematically across your drawing, copy the contents of each square into the corresponding square on-screen, taking the position that each line crosses the grid into the next box as a guide. Details and corrections can be added with magnify. SAVE OFTEN.

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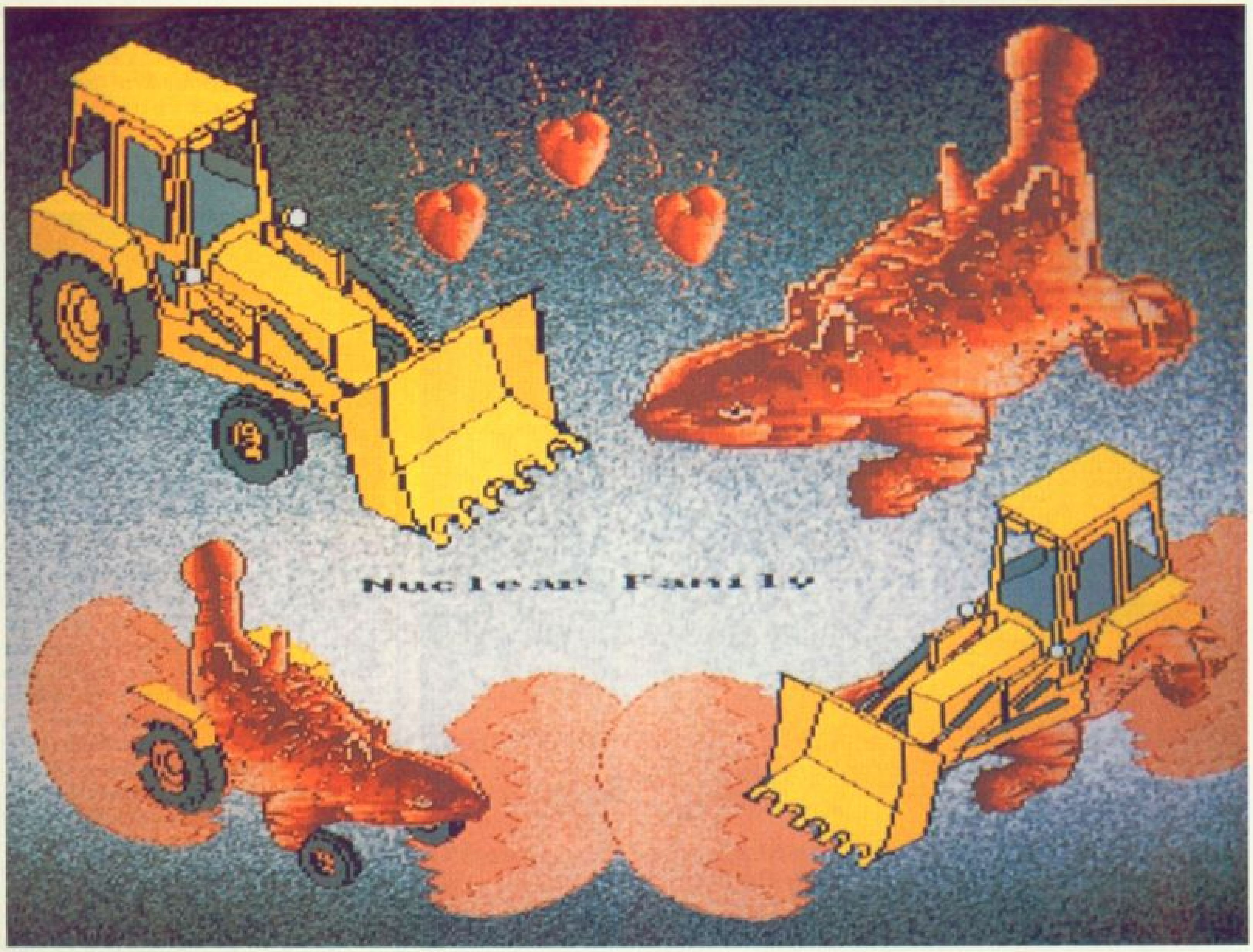


32 colour medium resolution (interlace) using Deluxe Paint 2 on an Amiga 2000

QUANTUM PAINT

ATARI ST 520/1040, EIDERSOFT £19.95

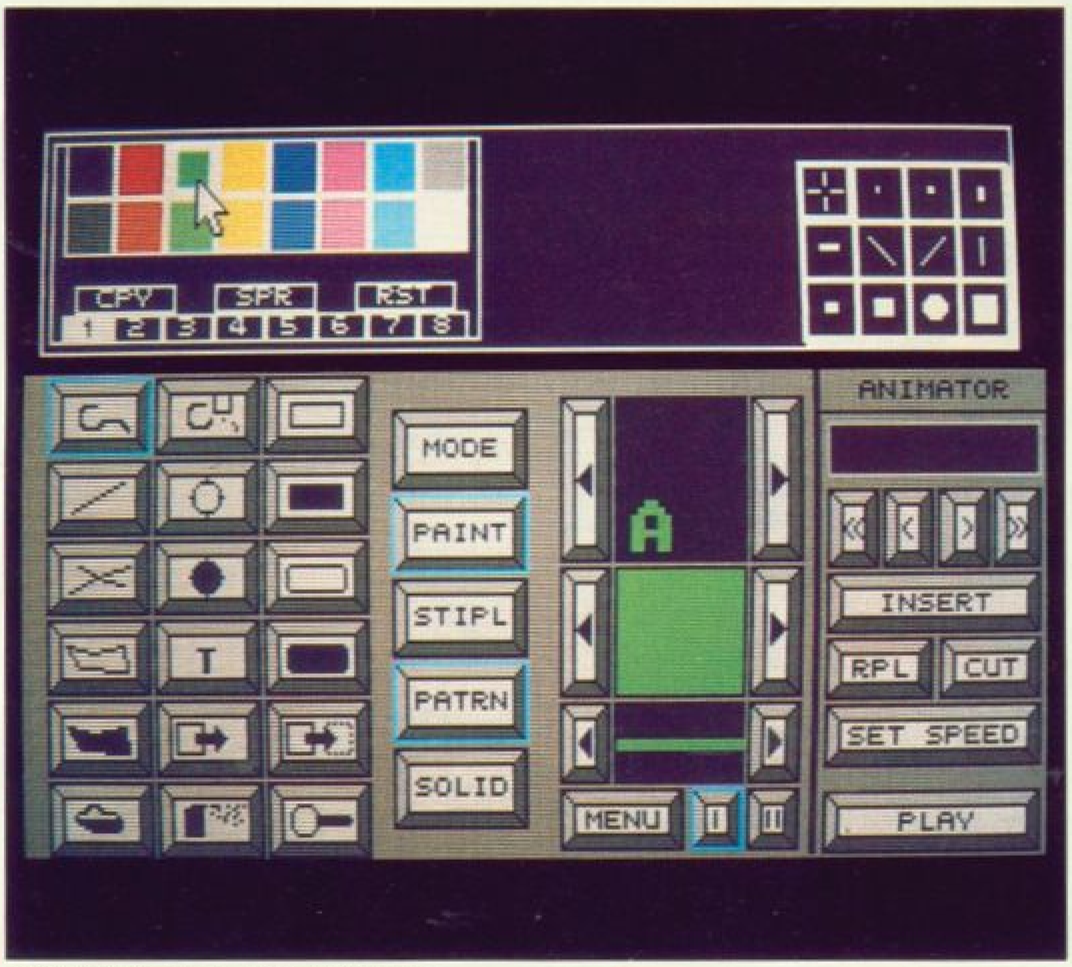
It was so obvious that hardly anyone noticed at first. *Neochrome*, the original art package for the ST, gave the first hint by using over 200 colours on-screen at once. Now Eidersoft have proved it with *Quantum Paint* – the Atari ST is actually capable of displaying 4096 colours on screen at once, just like the Amiga. Is it worth having? Brian Larkman finds out.

The trouble is, once you have got them what are you going to do with them? Some people would say that 4000 colours is ridiculously excessive. Certainly the new Macintosh II gets by with 256, as does Acorn's Archimedes. Nevertheless, as NewTec have shown with *DigiPaint* for the Amiga, 4000 colours provide beautifully smooth shading of pictures, allowing the drawing of realistically-shaded objects, transparency and reflection. To achieve these feats, *DigiPaint* has a whole range of sophisticated tools. What of *Quantum Paint*?

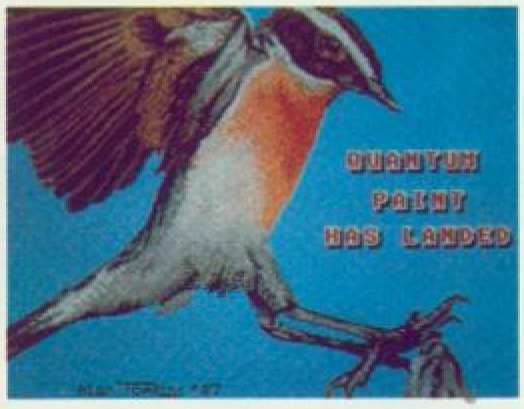
Let's start at the beginning. *Quantum Paint* is provided on a single disk and operates on all ST machines from the 520 upwards. It starts from the GEM workbench, though the program uses a customised interface of its own for operation. Before use, a 'Key-Word' has to be found from the manual, a simple operation that seems the least annoying method of protection, normally allowing the user to back-up their master disk as often as necessary. For some reason, the review copy refused to produce a useable backup, but Eidersoft say that it should be possible to copy all of the necessary files individually.

The control panel now appears. The completely clear drawing area is accessed from here, with the right mouse button in *Degas*-style. Filing, preferences, set-up options and other less-often used functions are reached from a second control panel via a Menu button on the main screen. The main controls are set out logically into three areas: basic drawing tools on the left, animation control on the right and palette control across the top.

Most of the drawing tools you would expect are present, though there are several suprises in a package of this nature, making it less useful than it ought to be. At first there seemed to be no Undo function, something even the most experienced computer artist would not want to be without. In fact, it is possible to undo via the keyboard UNDO key, though this is not mentioned in the manual. However, undo operates on all drawing that has taken place since the control panel was last brought up. For someone used to smaller-scale undo's, this is rather inhibiting and potentially disastrous.



Quantum Paint – the menu screen where everything starts



CUT AND PASTE

Even more inhibiting is the limited cut-and-paste. Areas of the screen can be picked up and moved or copied, or used as brushes, with or without a transparent background. They cannot be saved and loaded, even onto a temporary clipboard, or between *Quantum Paint's* two drawing screens. This prevents one of the major advantages of computer art over the more messy variety – building up pictures from a library of components. On the plus side, it is possible to 'lassoo' areas just by drawing round them freehand. Nevertheless, this absence could, for people used to more sophisticated cut-and-paste, relegate *Quantum Paint* to being useful merely for working on pictures produced by some other package or digitiser.

PALETTE CONTROL

The top of the control panel is the area of real interest – making *QPaint* a unique program on the ST – the palette control. Using (to quote the manual) a system of '...Horizontal Blank Interrupts to completely exchange a new palette of colours for the current one, while the picture is being displayed on the video screen...', four new modes (128, 32, SP512 and SP4K) have been added to the ST's graphics capability. The simplest of these are the 128 and 32 modes, low and medium resolution respectively, providing – yes, you guessed it – 128 or 32 colours on-screen.

Within the palette control area is a normal 16 (or 4 in low res.) colour pallete. Each of these colours can be selected individually from a full screen display of all the ST's normal range of 512 (activated by the PICK button), or by using RGB sliders. Colours can also be copied between 'paint-pots' and spread between two selected colours giving an evenly graduated range. Beneath the 'current' palette is a set of buttons numbered 1 – 8. Clicking on each of these will display its respective pallete, allowing it to be set up or changed. Double-clicking on a button brings up a Cycle requester so as to independently control range, speed, and direction of colour cycling for each.

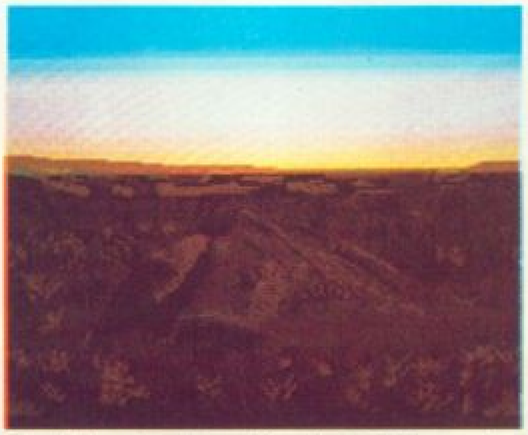
When they are activated, each of the eight palettes available can control a horizontal band across the screen. The PALETTES button on the second – 'control' – screen brings up a requester displaying the state and distribution of all palettes by means of eight wide 'sliders', which can be dragged up and down the screen, and eight 'toggles' to turn palettes on or off.

The effect of these controls can be seen in the picture 'Madonna'. The background consists of a series of zones of colour, each independent of the others. Seen 'live', these zones are shimmering with colour caused by colour cycling. Only the colours in the foreground (of the face and hair) are common to all palettes. Similarly, the landscape picture, 'Carved Stone' has two independent 16-colour palettes just to produce the smooth sky colours, plus two more to shade the middle-distance and foreground.

In use, 128 mode is quite straightforward. The palettes are simple to set up and drawing is satisfactory within the limitations of the tools already mentioned. Oh, but how nice it would be to have more control over how the colour is distributed. Freehand cycle draw allows each of the colours in the cycle range to be painted in sequence as a brush line is drawn, but there is no cycle draw on any of the other tools, and dithered fills are not available. This is a great pity. Having gone to the trouble of providing so many colours on-screen, the tools for using them really should be more sophisticated. On the plus side of colour control (although not implemented on the current version), the manual promises anti-aliasing, smoothing and smearing – all very useful effects.

SUPER PALETTE

In the centre of the main control board is a button marked MODE. Clicking on this allows selection of the two Super Palette modes. It's when using these, especially 4K mode, that the real achievement of David T Jones, the programmer of *Quantum Paint*, can be appreciated. Super Palette allows the use of either 512 or 4096 colours on-screen, something that most ST artists though was possible only on the Amiga.



Carved Stone – two palettes used to produce the sky, two more for the foreground and background

In practice, SP modes are slightly more fiddly to use than 128 or 32 because of the need for draft screen. Most of the normal *QPaint* drawing tools except flood fill are available, but the colours that appear on-screen are selected from a suitable range of 16, like a normal ST palette, so the draft drawing can be rather dull. No matter, after a period of inactivity (the length of which can be set) the program is able to calculate the correct colours to display and presents a full colour screen. If you do not mind the slight flicker of an interlaced screen, all 4096 colours can be seen (well actually only about 3500 different ones) or 512 without interlace.

It seems a little churlish to pick holes in this amazing achievement, but as was mentioned at the beginning, 4000 colours are only as useful as the tools available for painting them with.

The S P Modes mentioned in the manual are, like most of the Draw modes, not implemented on this version, so I cannot comment on their use. If they are anything like the similar Modes in *DigiPaint*, then they will be great. Nevertheless, it is colour drawing tools like dithered fills and shading that are the most commonly required means for using lots of colours. The lack of these is the greatest limitation of the package.

One of its great advantages, though, is the simple animation facility provided. Any screen can be saved not as a full screen dump disk, but as a delta file containing only the differences between the current picture and the previous one. If only cut-and-paste brushes could be loaded from a library, simple animation would be very easy. Even now, in combination with the excellent colour cycling facilities, animation is good.

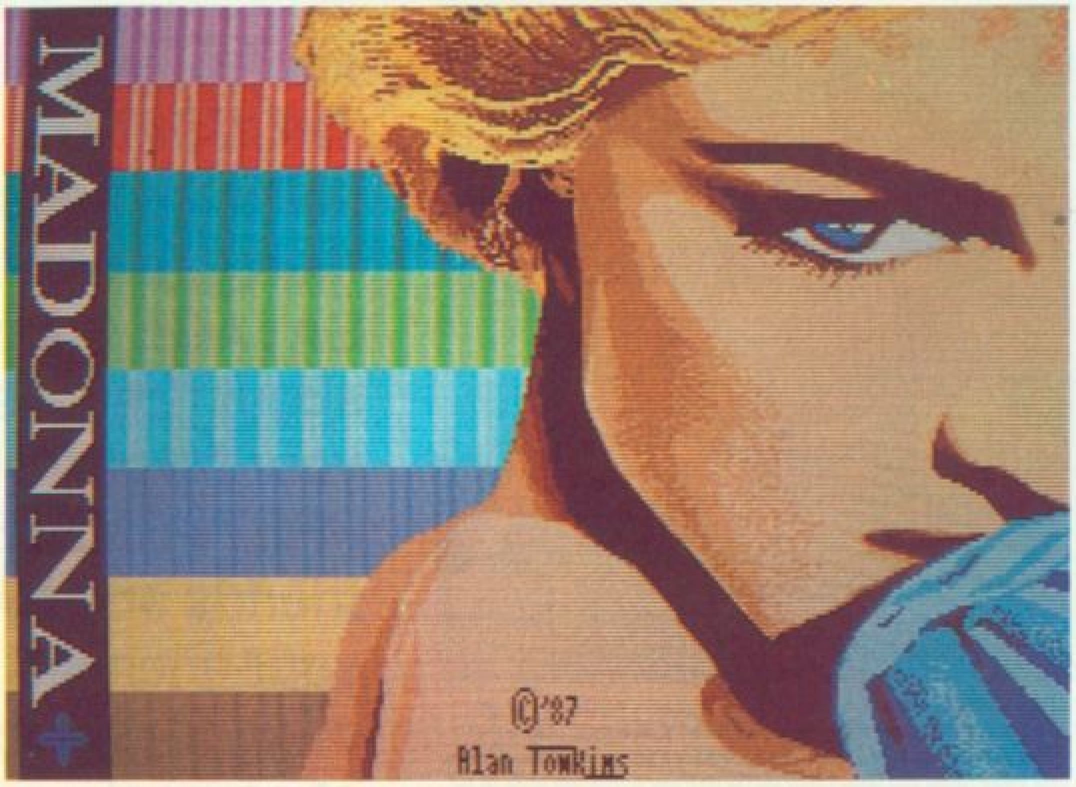
Quantum Paint is going to be a spectacular program. At present, it is very good, especially for the price (£19.95), but not really finished off to the point of replacing the '...weird and 'wonderful' graphics novelties...' of other programs (to quote the manual). Eidersoft insist that there is a definite upgrade path to version 2 for a nominal sum (but only to registered users). Version 2 will have all of the colour manipulation tools mentioned in the manual plus some, if not all, of those I have suggested as well. In the meantime, Version 1 has to be a must for any ST artist.

FOR

- 4000 colours
- 4 extra modes
- Easy-to-use animation
- Amazing 512-colour palette

AGAINST

- Inadequate basic drawing tools (especially cut & paste)
- Very few specialised colour manipulation tools



Madonna – Only the colours in the foreground are common to all palettes.

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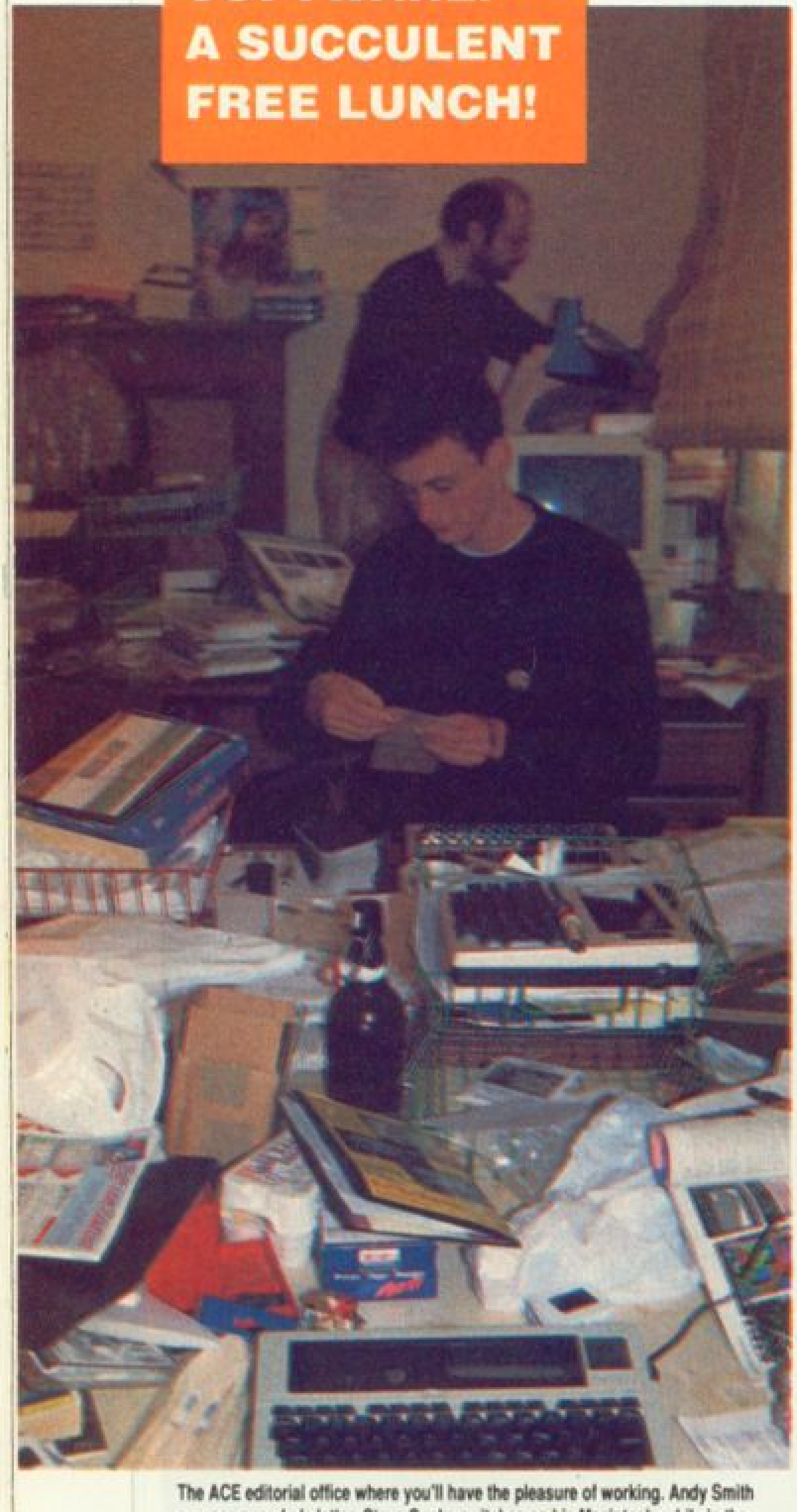

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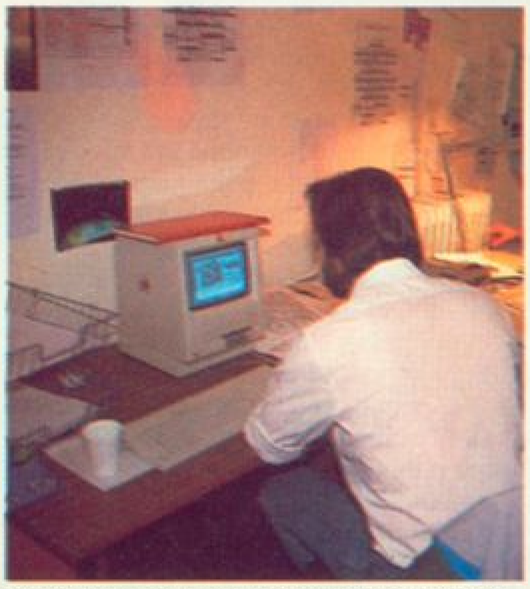

Production Editor Rod Lawton working on the Macintosh, checking for the numerous spelling errors in copy written by Andy Smith

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Tie Breaker

Here's a letter from a poor soul in agony. In not more than 25 words, write – on the dotted lines below – a suitable reply to print in the magazine.

Dear ACE,
I am having a problem. I cannot get my my disk version of *Elite* to load into my Sega Console.
I am getting desperate. Can you help?
A. Wally Berkshire

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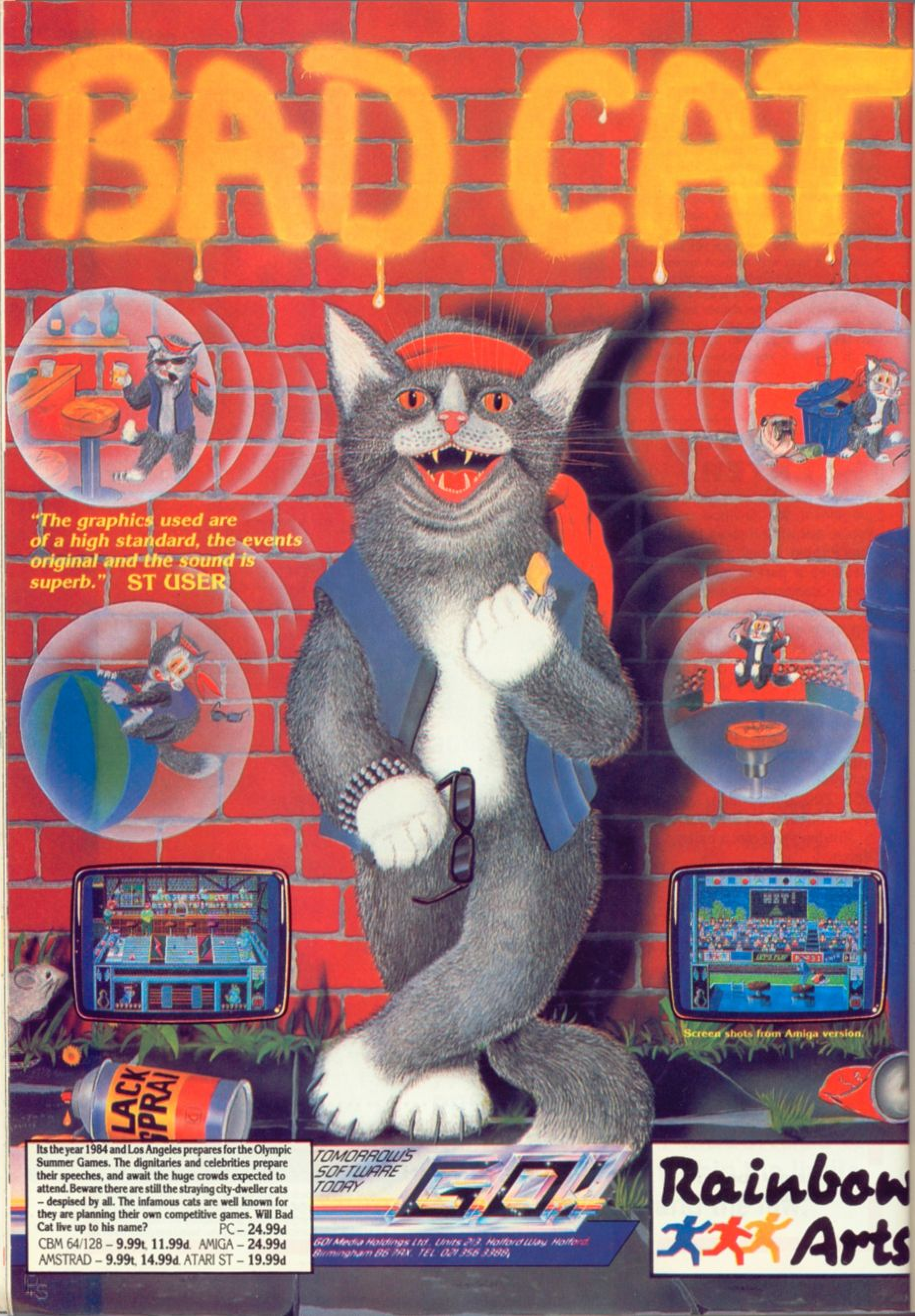
BAD CAT
"The graphics used are of a high standard, the events original and the sound is superb." ST USER
Screen shots from Amiga version.
TOMORROW'S SOFTWARE TODAY
G.O!
Rainbow Arts

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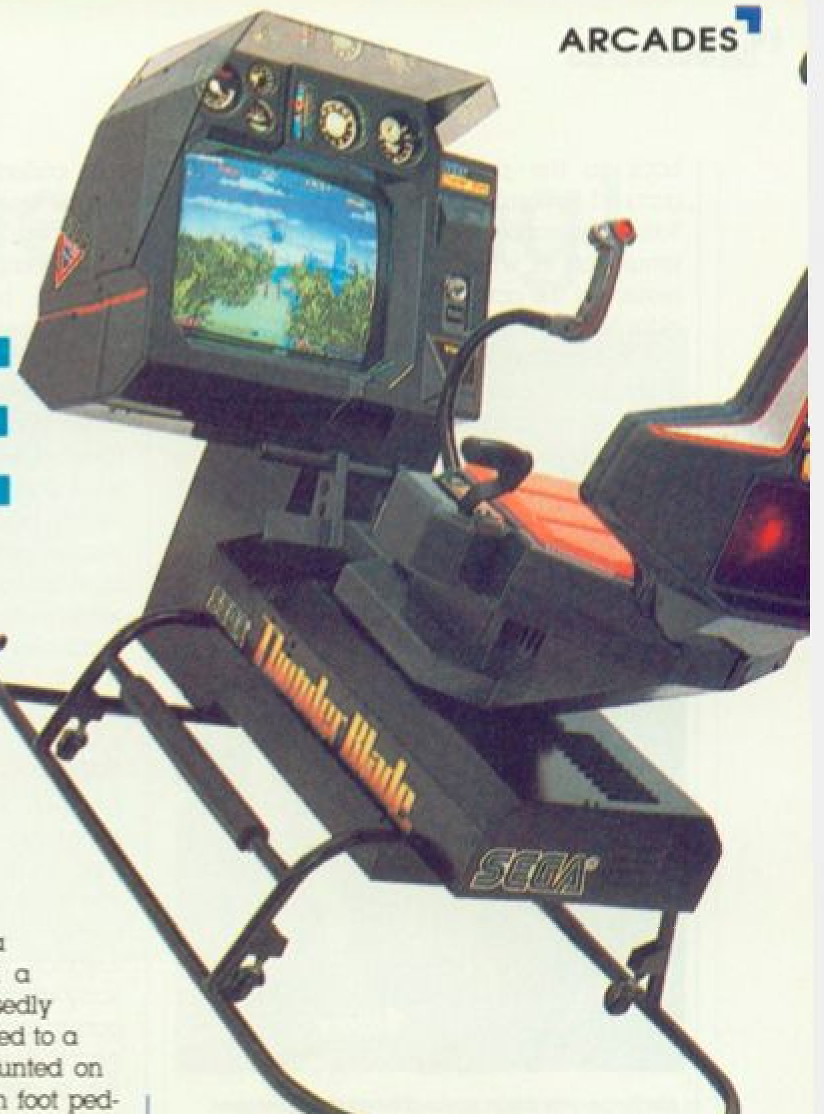
BACK TO THE FUTURE

Coin-ops in 1988 - Chris Jenkins reports from the 44th Amusement Trades Exhibition at Olympia.



Truly it has been said that today's coin-op is tomorrow's home computer game. Verily, from *Space Invaders* even unto *Rampage* has it been so, and thereby shalt thou know the shape of next year's hot products.

All that may change, though, if the signs and portents seen at the arcade industry's annual get-together at Olympia come to pass. It looks as if the coin-op industry has run out of new ideas for game themes and has come to sticking point in the actual graphics handling technology. Next year's big gimmicks, it seems, will be the cabinets rather than the contents.

In a bid to woo players away from their computer and back to the arcades, the Japanese and American coin-op designers have been concentrating on the areas where home computers cannot compete – the actual playing environment. While the comfort of your living room may distract you from the serious business of alien-bashing, the arcades can give you the surroundings, the feel, and even the smells of the real thing. Companies such as CapCom are said to be experimenting with the arcade equivalent of 'Scratch'n'Sniff' technology, by which appropriate odours will be wafted through the cabinet as you play. The problem so far is that they've perfected the nauseating smells such as engine oil, cordite fumes and burning rubber, but can't come up with anything that people actually WANT to smell. I think it will be some time before the arcades ring to the cry 'Was that you, or have I just scored a bonus?'

The major move, then, is away from spectacular graphics systems such as cartoon-based laser disks, multiple monitors and giant screens, and towards mechanical effects built into the cabinets. The target to beat is Sega's *Afterburner*, the sci-fi jet fighter simulation featuring stunning graphics, housed in a £4000 hydraulically-operated sit-in cabinet. Obviously, it's the cost of such units which make them relatively rare; but there are cheaper alternatives which look set to dominate the market. Sega's *Thunderblade*, for instance, is a fairly straightforward helicopter simulator. Presented as an out-of-cockpit view, it includes brilliant graphics of high rise buildings through which you have to weave, forests patrolled by lightning-fast fighter planes, sea-borne forces, and weapon-festooned caverns. Your task, believe it or not, is to blow the lot to hell.

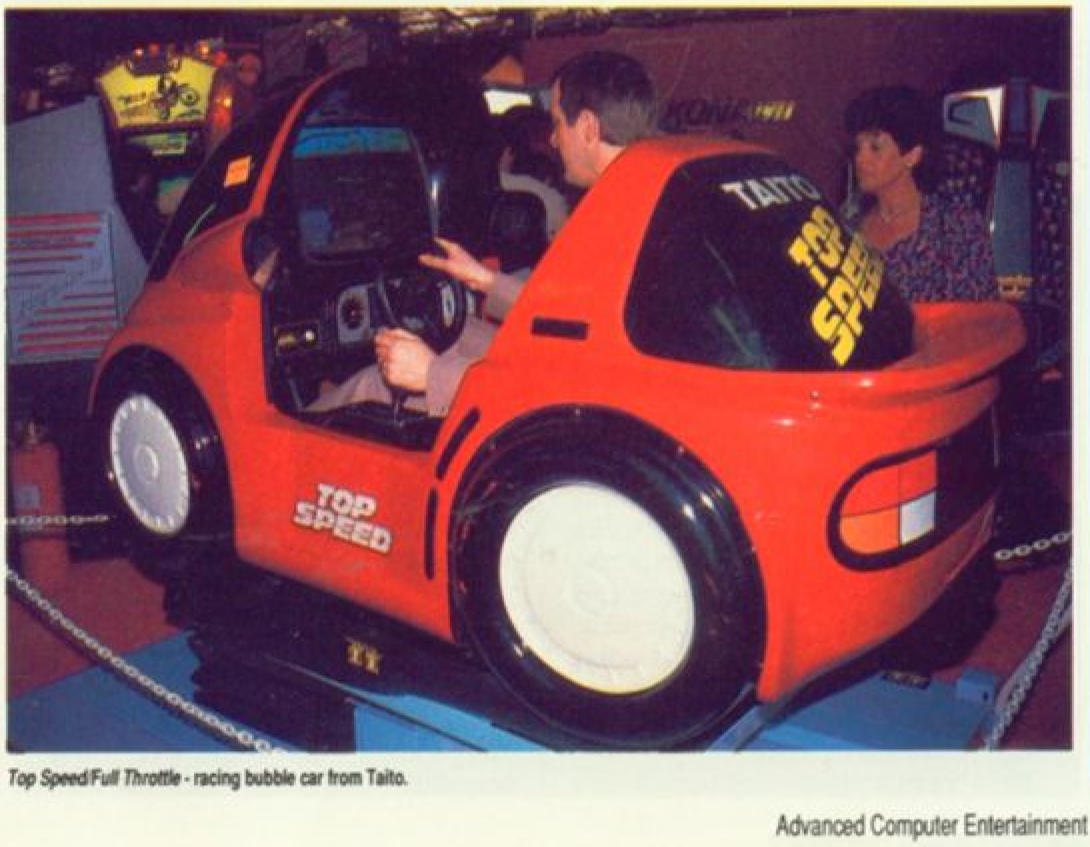
Thunderblade is available as a free-standing cabinet, but, like many new games, it's also available in a Deluxe version. This consists of a twenty-inch monitor mounted in a control panel featuring supposedly realistic helicopter controls, attached to a toboggan-like body on skids. Mounted on this is a pilot's seat, complete with foot pedals, joystick with firebutton, and speed control to one side. As you fling your chopper through the skies, avoiding buildings, gunfire and enemy planes, the chair rocks from side to side and tips backwards and forwards. It's a tremendous feeling which immeasurably enhances the game, and which certainly couldn't be reproduced outside an arcade.

Unlike the expensive *Super Hang On* and other hydraulically-powered simulators, *Thunder Blade* uses a simple system of levers connected to the joystick; it's therefore much cheaper to buy and service, and so should encourage a whole wave of similar games such as Konami's *WEC Le mans* racing simulator.

Another exciting-looking ride-on is Namco's *Final Lap*. It's very similar to existing machines such as *Outrun* in many ways. However, the cabinets, mounted on hydraulics, fling themselves backwards and forwards, and they can be electronically linked together so that up to eight players can race at the same time. Taito's *Full Throttle* also features hydraulics. Available too in free-standing form, this one has a cabinet which looks more like a bubble-car than a formula one racer, but what the heck. The action is strangely suburban too with villages, underpasses and bridges rather than race tracks.

GOING TOO FAR?

Another impressive 'feelie' is a bit of a throw-



Top Speed/Full Throttle - racing bubble car from Taito.

back to the pre-micro cowboy shooting games I remember playing when I was ten. Taito's *Operation Wolf* is an incredibly noisy simulation in which you will soon find the realism of the action urging you into a homicidal frenzy.

The cabinet is deceptively simple, a lovingly-reproduced Uzi sub-machine gun mounted on a column, featuring a conventional trigger and a barrel-mounted stud to launch grenades, points towards the screen inset behind a glass shield (to prevent ricochets, perhaps?).

AfterBurner – mini ride-on version of the existing cabinet game.

The game's simple too; six static scenes of jungle warfare in which you must gun down the enemy while completing your mission to knock out communications, or pick up ammunition, or rescue prisoners. Enemy soldiers run, roll and parachute onto the screen, hurling grenades, shooting wildly, and even in one memorable scene shielding themselves behind civilians who you must not shoot. You fire back madly, searching out spare clips, rocket bombs and first aid kits to replenish your supplies. The gimmick is that as you shoot the gun bucks wildly, throwing your aim way off and forcing you to squirt valuable ammunition wastefully in order to be sure you demolish all the troops, helicopters, jeeps and gunboats before they shoot you down.

Operation Wolf certainly made me get carried away; my policy of aiming careful shots and avoiding shooting civilians soon gave way to a murderous bloodlust in which I quite happily blew off the heads of flak-jacketed soldiers. If anything, *Operation Wolf* takes realism a little too far and raises questions as to whether these games ought not to be subject to some form of monitoring.

The same accusation could be aimed at Sega's *Heavyweight Champ*, another 'new' idea which in fact returns to the mechanical penny-arcade games of old. *Heavyweight Champ* is a boxing simulation using graphics of a type which has been available in various forms for a couple of years, a six-foot high cabinet mounting a twenty-inch monitor depicting a 3-D view of the ring. You look through your player, who is shown in outline form , to see your opponents. A number of attacking and defensive moves are possible, and if you can complete five fights within the time limit, you become champion and go on to defend your title against increasingly faster and more skilful fighters.

Some years ago you may have seen a film called Futureworld in which android boxers were controlled by players who wanted to work out their frustrations harmlessly. The idea's the game with *Heavyweight Champ*, because instead of twiddling a weedy joystick you grab hold of a pair of handles, and actually punch at the machine and swivel the top section of the cabinet to make your moves; straight forward for a jab, forward with a twist for a hook, move the lever from low to high for an uppercut, and weave and raise the levers to defend. I saw players getting really carried away with this and bashing at the machine for all they were worth; time alone will tell whether the machines can take the punishment, or whether players will manage to injure themselves punching at it.

SEQUELS

Another trend for '88 is to produce much enhanced sequels to old faithfuls (I told you they were running out of ideas). Whether you think this is worth the effort is largely a matter of taste. Atari's *Galaga '88* for instance, is a follow-up to one of the biggest early arcade games. In the new version, the game remains the same; waves of aliens swoop down from the skies, trying to bomb you or capture your fighter. The difference is that instead of the weedy two-colour sprites, we now have massively detailed and amusingly individual enemies, glittering crystals and rotating asteroids; the jingly music is replaced by stunning digital effects and hilarious dance tunes in the bonus sections; and the backgrounds are now marvelously detailed, with space stations, whirling starfields and planetoids. OK for a blast, but nothing more than a prettyfied version of the original.

5304
Thunder Blade
SEGA

Feel, fly, and fire as you soar through the great blue yonder on Sega's *Thunder Blade*.

The same can't really be said of *Blasteroids*, which takes the old *Asteroids* scenario into a totally new dimension. Now, instead of monochrome vector graphics of pointy spaceships and boulders, you have monstrous multi-colour mother ships, hordes of tiny space fighters, battle cruisers, AND asteroids to contend with. You can hit one of three buttons which cause your fighter to reconstruct itself into different modes, designed for fighting, running or defending. Having cleared one screen you hyperspace into another star quadrant, with another brilliant background and another set of enemies. It's fun, but like *Galaga '88* looks a bit primitive compared to the latest 3-D fighter simulations such as *Grey Out* or *Tornado*.

CUTESY

Another trend which fails to inspire me with excitement is the return of the cutesy game. Apart from Atari's *Pacmania*, follow up to the ground-breaking *Pacman* and *Pacland*, we are also promised *Rainbow Island*, Taito's sequel to *Bubble Bobble*, and *Mr Hell*, Irem's stab at the cutesy market which makes one think they'd be better off concentrating on blasters such as *R Type*.

I can't see myself spending many tenpences on those orgies of twee-ness, but I think the old piggybank will take a bashing at the latest round of combat games. Most of the designers have solved the problem of these games being so static by combining elements of the horizontally-scrolling shoot-em-up. Taito's *Ninja Warriors*, for instance, uses a giant three-monitor system to display highly-detailed backgrounds of street scenes and military bases. Your Ninja (or Kunoichi – apparently a lady ninja, although I don't know how you can tell with all the clobber on) must defeat soldiers, guard dogs, tanks and fire-breathing demons using leaps, crouches, and the ever-reliable Shuriken and sword. Lovely graphics, then, though little in the way of originality.

Sequelitis is even hitting shoot-em-ups, with Taito's follow-up to *Tiger Hall* and *Flying Shark* due to put in an appearance soon. *Twin Cobra* scrolls vertically, includes scenes over jungles, deserts, and dockyards, allows you to pick up extra weapons such as lasers, bombs and smart missiles, and has a two-player mode. Original, it ain't, but then neither is *Typhoon*, Konami's jet-fighter shoot-'em-up which does at least feature an unusual mixture of top-view and perspective gameplay as you battle to destroy the inevitable planes, missiles, aircraft carriers and ground bases.

TAKE YOUR PICK

Another new trend is towards multi-game consoles. Although for obvious reasons these are limited to the less ambitious titles – none of your smellivisions, hydraulics or rattling machine-guns here – Nintendo's *Playchoice Ten* does at least have eye-level stereo speakers, and a pistol attached to it for games such as *Duck Hunt* and *Wild Gunman*. More conventional games, such as *Castlevania*, *Mario Bros*, *Volleyball* and *Metroid* can also be found on these units, which at least give you a wider choice of games, even if they aren't state-of-the-art. Arcadia's Super Select System works on the same menu-driven principle.

1988, then looks like a year for mechanical rather than electronic advances. Soon we'll be sitting on, riding in, punching, shooting and probably kicking our coin-ops rather than just twisting the joysticks. From now on, while you're enjoying the games, you can be getting some exercise too.

...and back to the blasting!

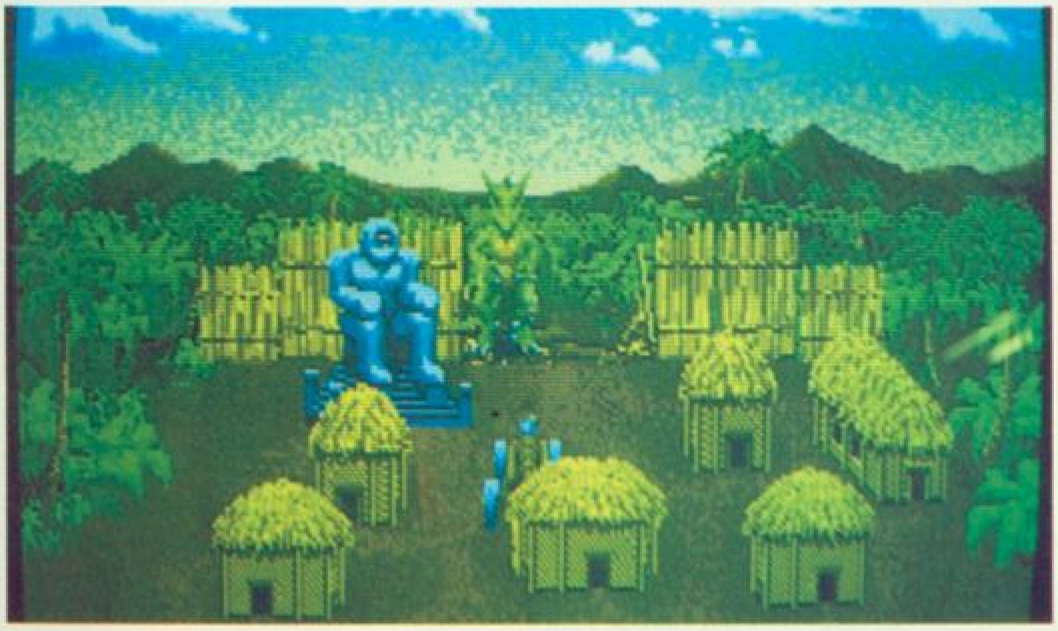
● AARGH!

Arcadia
20p per game

As 68000-based micros come to dominate the home computer market, the dividing line between computers and coin-ops becomes increasingly blurred. Just to make things more confusing, Mastertronic's coin-op division Arcadia is now developing machines using Commodore Amiga circuitry, implying that the resulting home computer conversions will be nearly identical to the coin-op originals.

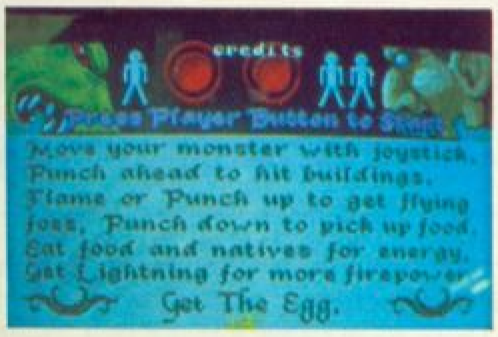
If that's the case, I can't wait to get hold of *AARGH!* (I think you have to shout to get the full effect) which is a fairly unashamed rip-off of *Rampage*, the monsters-on-the-loose game recently launched in home micro form by Activision. *AARGH!* takes the basic idea of making you the baddie and offering you the chance to do as much damage as possible, but throws in some neat twists and great scenario.

...the gate opens



Set on a jungle island straight out of King Kong, the one-or two player game lets you control either a Godzilla-like dinosaur, or a fearsome cyclops. The opening map shows you the island's main beauty spots, which you must reduce to smouldering rubble. The first scene is a native village guarded by enormous gates, which crumble at your assault to allow you to run amok inside the compound. Pleasing perspective effects allow you to move in any direction around the native village.

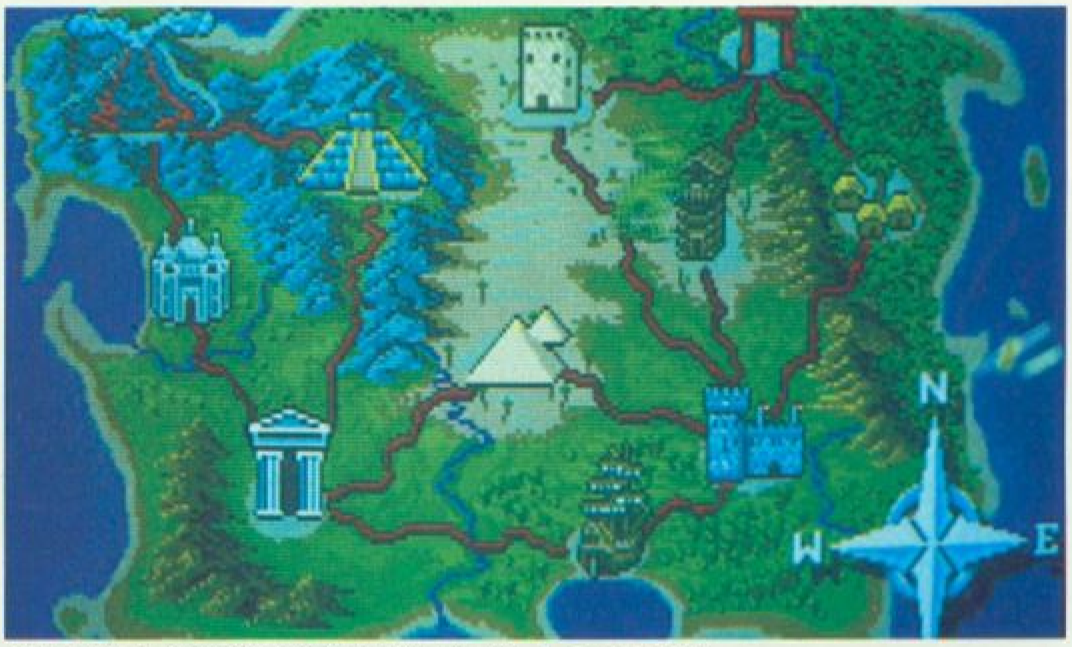
The instruction screen



credits

Press Player Button to Start

Move your monster with joystick.
Punch ahead to hit buildings.
Flame or Punch up to get flying
foes. Punch down to pick up food.
Eat food and natives for energy.
Get Lightning for more firepower.
Get The Egg.



...map of the island

Your task is to smash up everything you can, a process which is depicted in gory detail. Breathe on thatched huts and they burst into flame, little natives running around until you stomp them into puddles. Batter huts with your fists and they fall into smoking heaps. You can even climb on top of them to finish off the job.

It's not all fun, though. In the two-player game, you're competing for points against the cyclops; in the one-player game, something even more fierce.

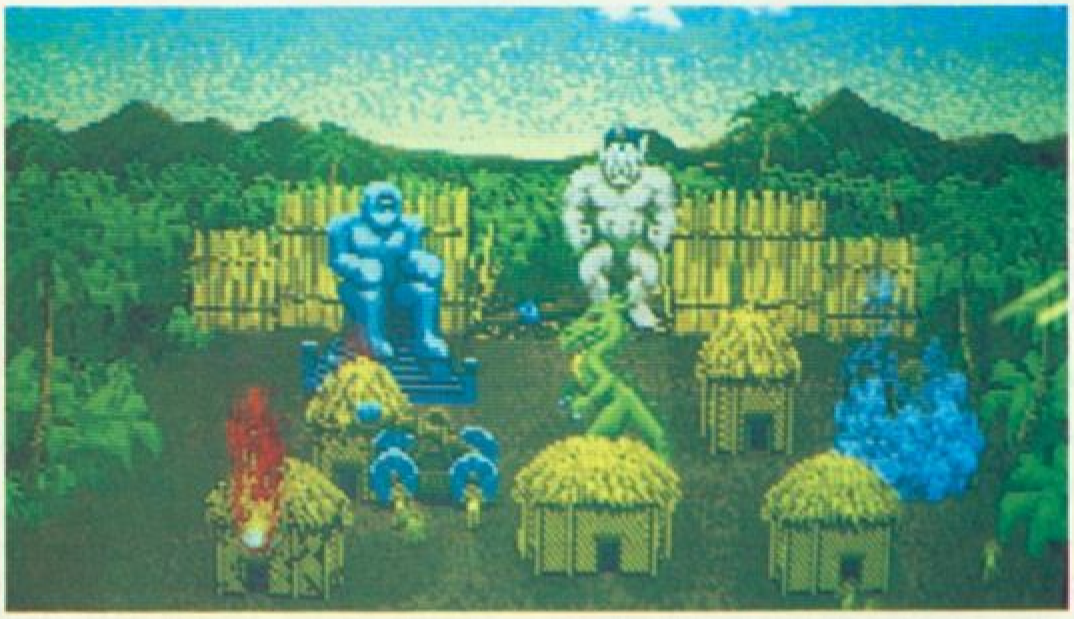
The natives are obviously used to the monster's shopping expeditions, and have knocked together a little deterrent in woodwork classes. This stone-throwing catapult can be very detrimental to your health, so as the natives drag it around the village trying to get within range, you should chase after them and give them a taste of the old death-breath.

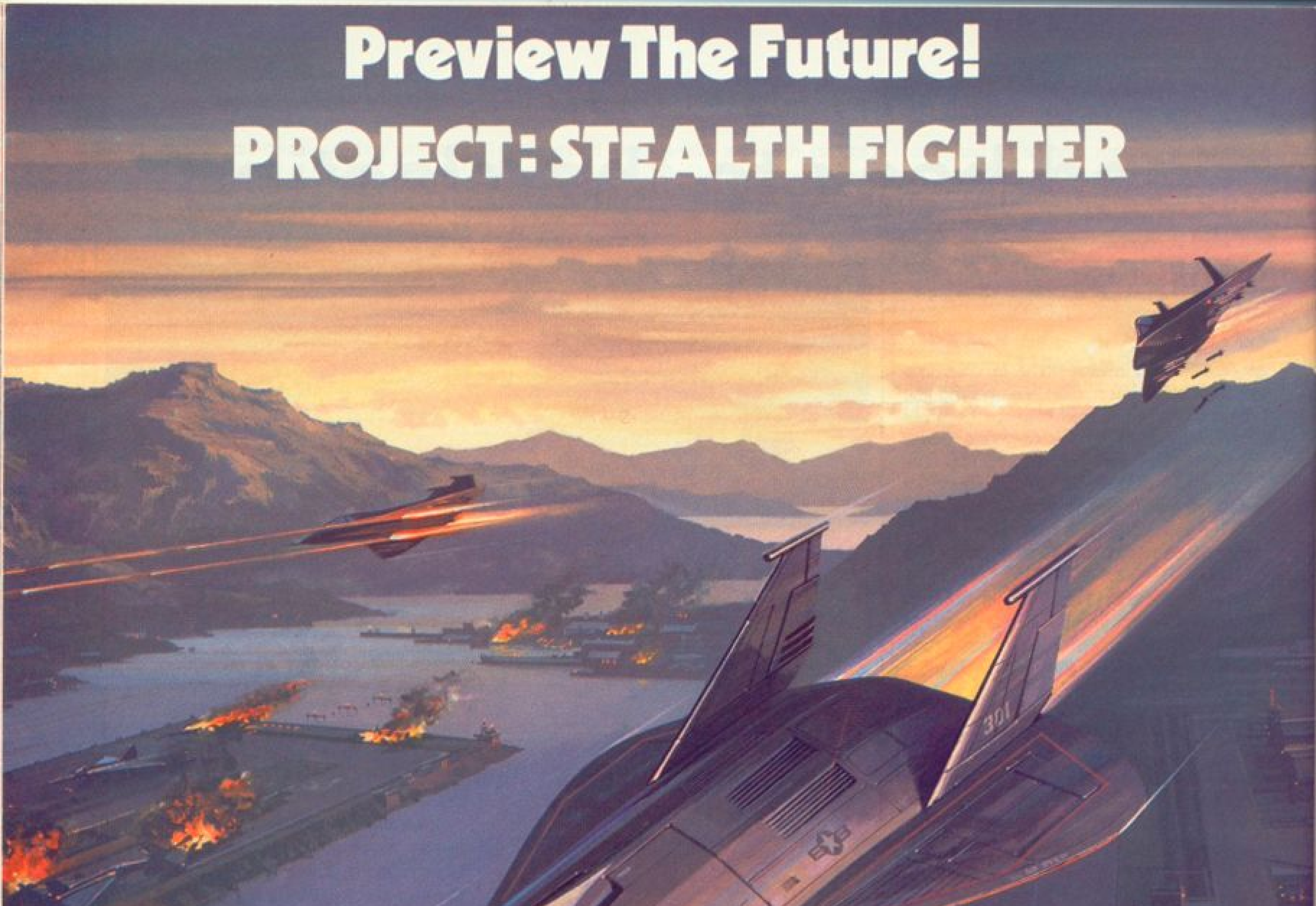
As you progress through the villages creating mayhem, more threats loom, including giant insects which try to bite off the top of your head.

Should you be unfortunate enough to run out of energy, your monster collapses in a bloody mess of cutlets which look just about the right size for the cooking-pot.

Endearingly tasteless and violent, *AARGH!* should establish Arcadia as an arcade force to be reckoned with.

...rampant destruction!





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AFTER PONG

Remember the first time you played *Defender*? Christina Erskine charts the development of the arcades, from the good old, bad old days, to the first official license between the coin-slot industry and the home-computer copy-cats.

Which was the first ever video game to hit the arcades and start off the coin-op craze? All those who answered *Space Invaders* go to the bottom of the class. Brownie points to everyone who remembered *Pong*.

Pong was the first commercial video game, written and launched in 1972 by an American university graduate called Nolan Bushnell. His fledgling comapany, Atari, sold the game into hundreds of bars and amusement arcades in the United States. A year later, *Ping Pong* arrived in the UK with immediate impact. To arcade visitors, *Pong* made a complete change from one-armed bandits and pinball machines. The video game boom had begun.

These days, *Pong* looks laughably primitive, but even in these early days certain simple guidelines were established that are recognised even by today's multi-colour mega-games - simplicity, addictiveness, scoring, increasing levels of difficulty (although in the very first versions the ball didn't speed up as the game progressed) and competition between two or more players. The game consisted of two blocks representing each player's bat, and a crude, square 'ball' moving slowly between them.

16 years ago, its like had never been seen before. Throughout 1973, *Pong* hurtled into amusement arcades up and down the country. Then, almost as quickly as the craze took hold, it faded out again. By 1974, the original *Pong* was burnt out and the embryonic industry which had grown up around it took stock.

The first versions of *BreakOut* - which in 1988 is enjoying a renaissance through *Arkanoid* and *Impact* - appeared in 1974 and established yet another industry guideline - the variant clone. This *Pong*-derivative kept the balls on the screen and the video game industry in the black for some time, but after the initial enthusiasm for *BreakOut* had waned, things remained quiet on the coin-op scene for some years.

ENTER THE JAPANESE

Pong and *BreakOut* were both developed in the US. It wasn't until 1978, with the arrival of Taito's *Space Invaders*, that the Japanese burst onto the market and the popularity of video games exploded all over again, and with an alarming intensity.

Taito was kept busy manufacturing 400,000 *Space Invaders* machines for the Japanese market alone, and licensed rights outside Japan to US company Midway in order to cope. By 1979, there were something in the region of 750,000 *Space Invaders* games instaled in arcades, pubs, and public buildings throughout the world, around 85,000 of them in the UK.

Space Invaders fever abated somewhat by 1980, but this time there was a plethora of quality games to take its place. *Galaxians* was the first significant landmark - another variant clone (this time on *Space Invaders*) but now in glorious technicolour. Then came three very important releases which together with *Galaxians* have shaped both the arcade industry and (to an even greater extent) the computer games market ever since.

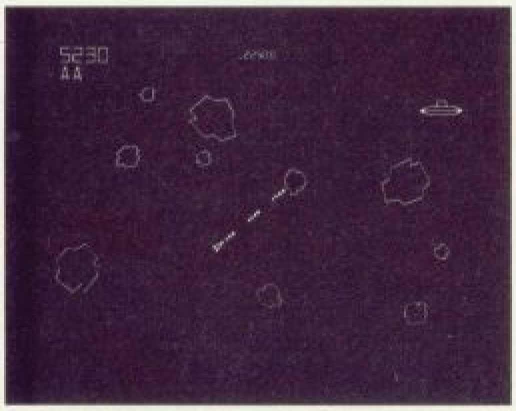
First, there was *Scramble*, which together with *Defender* established the horizontal scrolling shoot-em-up. You will find very little in a modern game like *Plutos* that doesn't exist in the original *Scramble* scenario. *Defender* gave us even more reversible flight paths and (most important of all) a complex game objective featuring search, destroy, and mutation. Another point worth noting about *Defender* is the long-range scanner, solving the problem of a field-of-view limited by the monitor display most effectively.

The other two games of note were *Donkey Kong* and *PacMan*. The former was a colour game featuring platforms and ladders – a game-style that was rapidly copied by vast numbers of home computer software houses, though the ladders slowly disappeared. The platforms, however, are still with us in games as diverse as *Impossible Mission* and *Jack the Nipper II*.

PacMan established the vastly influential maze concept (later given 3D status by Monster-Maze type games). It remains a perfect example of a game combining total simplicity with manic addiction.

Along with the originals came copies and clones, many of which emerged from the Far East, where the new industry was burgeoning and the copyright laws were lax. For a year or two, the coin-op industry relied on variants of these classic genres for its ideas, with the odd driving game, such as Atari's *Pole Position* and *GT-10*, there for variety.

The tradition of cloning, copying, and piracy kept things humming for a while, but inevitably the wheel soon turned full circle and the bottom fell out of the market as manufacturers were unable to reap the necessary rewards from their products before the pirates stepped in to steal the customers. Today, companies such as Sega and Taito seal the custom chips used on the game's circuit board to make it difficult for would-be cloners to break in. It gives their new games a vital three-month start before the closely-related variants appear. In the early 80's, such refinements had not yet been devised.



Great game, but something of a dead end in style terms. *Asteroids* was different in that it used a vector display (image produced using component lines, rather than component points or 'pixels') but despite its success there were few derivations to follow. Firebird's *Thrust* has a similar feel, but owes more to *Lunar Lander* than it does to *Asteroids*.

INTO THE HOME

By the time *Space Invaders* was being played everywhere you could physically fit a cabinet, Atari's first home video consoles were on the market. Thus began the relationship between home machines and the arcades, an uneasy one at first. Atari produced its own home console versions, but coin-op manufacturers were barely interested in the first true home micros.

As these machines, the Vic 20, ZX80 and ZX81, went on sale along came another opportunity for pirate versions – this time unauthorised versions of coin-op games on the home computer.

The success of the first home computers, particularly (in this country) the ZX81, led to a huge demand for software. Small back-bedroom companies sprang up overnight (many of which disappeared overnight as well) writing simple games for the new machines. Some of them were a bit short on original ideas and took their inspiration directly from the arcades.

The earliest examples were probably the versions of *Lunar Lander* written for the ZX80. But come January 1982 and the second ZX Microfair, visitors could take their pick from a wide variety of titles all bearing unmistakable resemblances to programs in the arcades. It should be added, however, that though the likenesses were obvious and intentional, the micro versions were largely very rough and ready, thanks to the limitations of the micros themselves and the comparative inexperience of the programmers.

Macronics (where are they now?) offered *Space Invaders*, *BreakOut*, *Planetoids* and *Dragon Maze* at the show; J K Graye Software had *3D Monster Maze* on display; Bug

Charting the changes

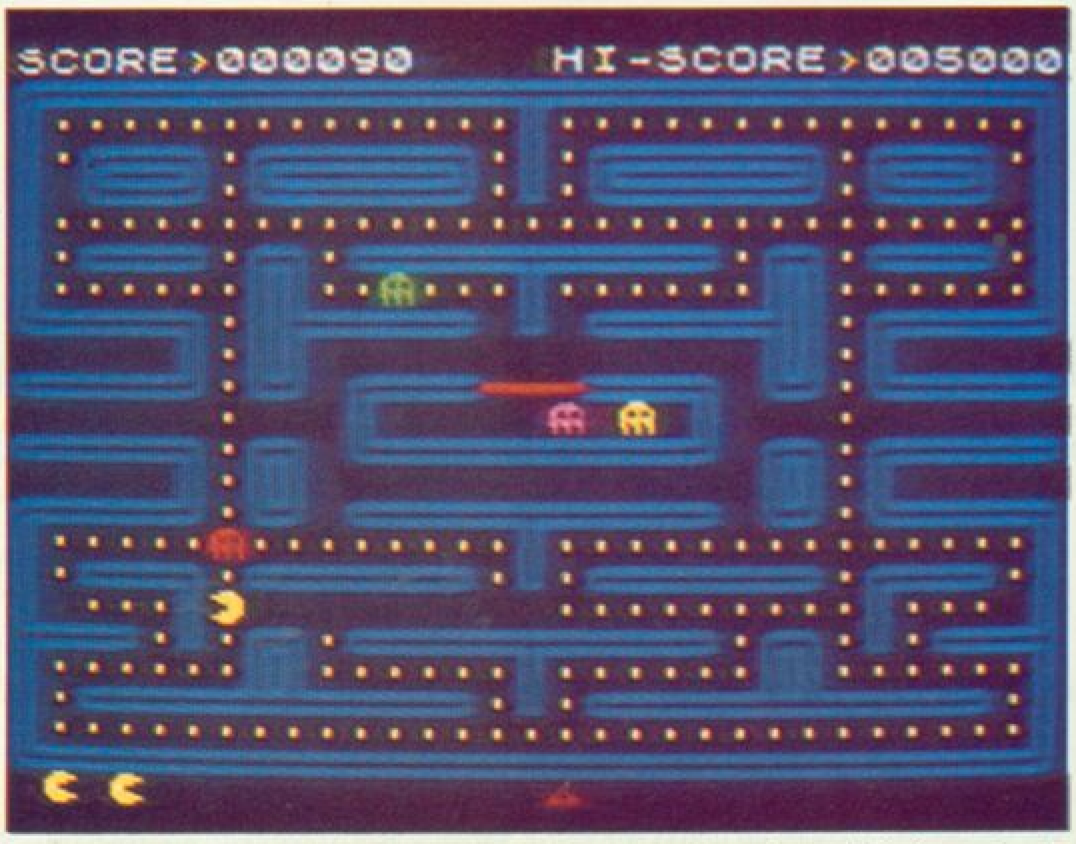
Andy Walker has seen both the coin-op and computer software industry at first hand. He began programming and designing coin-op games in 1981, stopped in order to set up Taskset Software – of *SuperPipeline* fame – and has now gone back to writing for the arcades, currently for Mastertronic's Arcadia venture.

'The arcade industry has changed dramatically. When I first started in September 1981, we were not only writing the programs, but had a factory actually building the cabinets as well. We'd probably have done better if we'd just stuck to writing rather than trying to do everything.

'The pirate versions of arcade games by other arcade manufacturers almost killed it all off with over-exposure. Take *Scramble*, which was a very good original game. In the UK, there were people taking cabinets apart, photographing all the components and copying them, often in not very good cabinets. Suddenly from nowhere there were *Scramble* variants and rip-offs everywhere; everyone had to have the latest version.

'The early computer versions were a bit like that, though none of them could compare with the arcade original.

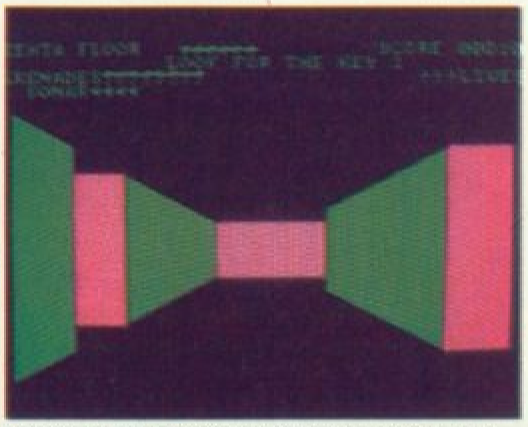
Andrew Hewson: in the good old days, questions of copyright simply didn't arise.



***PacMan* on the Spectrum – the only 'official' version, produced by Atarisoft. The simplicity of the game format made it ideal for conversion onto less powerful home computers.**

Byte demonstrated *Invaders* and *1K Break-Out*. Also at this time, Quicksilva (which still exists as a label today) was getting busy with titles such as *Defender*, *Invaders*, *QS Scramble*, *Asteroids*, and *Galaxians*. In the last named, Quicksilva attempted to distance the title slightly from the original, at least on the inlay blurb; the enemy spacecraft became mostrous birds dropping exploding eggs and your laser cannon was apparently a dragon-gut catapult. *Donkey Kong* appeared in a number of guises: as *Krazy Kong* (Interceptor Micros), or *Crazy Kong* (PSS), or even *Monkey Bizness* (Artic). And not a licencing or rights agreement in sight.

As Andrew Hewson, then the head of newly-formed Hewson Consultants, and responsible for a thinly-disguised little number entitled *Space Intruders*, says, 'It simply didn't occur to people that there was any kind of problem with rights. Everyone was doing versions of arcade games, so you just joined in'.



An early *3D Monster Maze* from Romik, running on the Spectrum. Nothing but *Pacman*, viewed from ground level, with pseudo-3D effects, but a game format that proved very popular for a time on home computers, spawning a number of variants of which the most notable must be the recent multi-player *MIDI Maze* for the Atari ST.

LEGAL INVADERS

The video game companies were slow to get litigious for a number of reasons. Firstly, in the very early days of computers, it simply didn't seem worth it to initiate legal action against a game that might sell a few hundred copies at most. It was only in 1982, when the software boom began to take off and games started selling in thousands, that they woke up to the fact that their ideas were being poached.

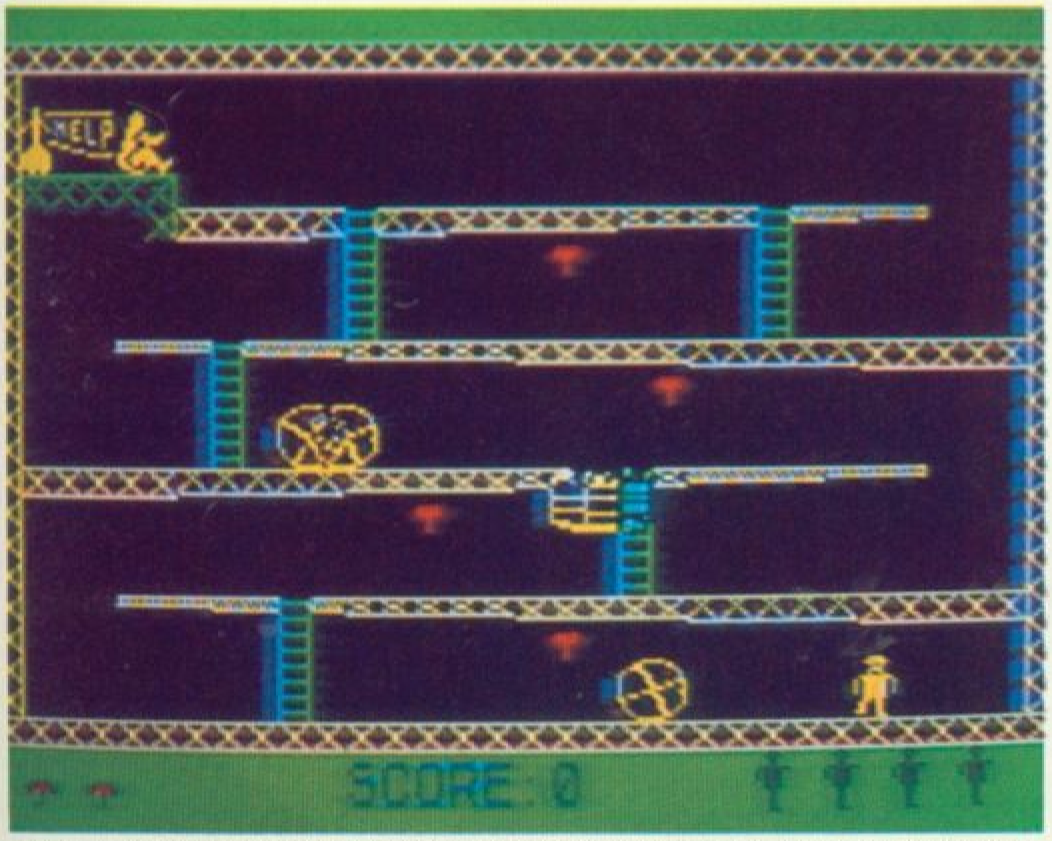
Even then, there were problems. Until the updating of the Copyright Act in 1985 specifically to include computer software, the copyright position regarding programs was a very grey area. Copyright was detailed as applying to the written word, works of art and

What a *Pong*!

'Everyone thinks *Pong* was my first video game, but in fact it was the second,' confides Atari founder Nolan Bushnell, 'The first was a game called *Computer Space*, which we licensed out to another company. It was not a great success. It had lots of spaceships and flying saucers all over the screen and all my friends liked it, but then they were engineers, and it didn't go down so well with the public. I then vowed that my next game would be something simple.'

Pong was certainly simple. At that time, Bushnell had already set up Atari as a research and development firm licensing its products to other companies to sell. Bushnell claims that the only reason *Pong* came out under Atari's name was that no-one else wanted to take it on.

He went on to write 20 or so games for Atari, including *Asteroids*, before selling the company to Warner Communications in 1976. After Atari, Bushnell set up his own company to design and sell robots, from simple functional devices to Petsters, a light-hearted robot cum fluffy companion for the home.



Monkey Bizzness from Artic. Apart from the obvious limitations imposed by the Spectrum, this arcade is a shameless clone of *Donkey Kong*. Nowadays a game like this would almost certainly result in legal action being taken.

Chronology – from Pong to the first official arcade licence.

1972 Nolan Bushnell writes *Pong*

1973 *Pong* machines become available in the UK.

1974 The first version of *BreakOut* hits the UK arcades.

1977 *Pong* is produced for the brand new Atari 2600 games console

1978 The Atari 400 sees the light of day in the US

1978 Taito's *Space Invaders*, the arcade game, sets off the second coin-op game explosion

1979 *Galaxians*, the first colour display video game is introduced

1980 *Defender*, the first game played with horizontal rather than vertical movement, appears.

1980-81 Games such as *Pacman*, *Scramble*, *Donkey Kong*, *Mr Do* and *Frogger* keep the coins going into the slots

1981 *Space Invaders* appears on console format for Atari machines.

1981 The Atari 400 and 800 games consoles arrive in the UK.

1981 The ZX81 is launched, and the UK home computer boom begins, Demand for software, particularly games, leads to hundreds of software houses setting up shop. Unauthorised versions of coin-op titles sweep the market.

1982 Atari releases *Pacman* for its console range

1982 Bug Byte withdraws *Vicmen* after threats of legal action from Atari.

1982 Atari goes on to do battle with Commodore over *Jelly Monsters*.

1983 Century Electronics licenses Superior and Ocean to produce offical versions of *Hunchback*, setting the final seal of legitimacy on the relationship between the home and arcade industries.

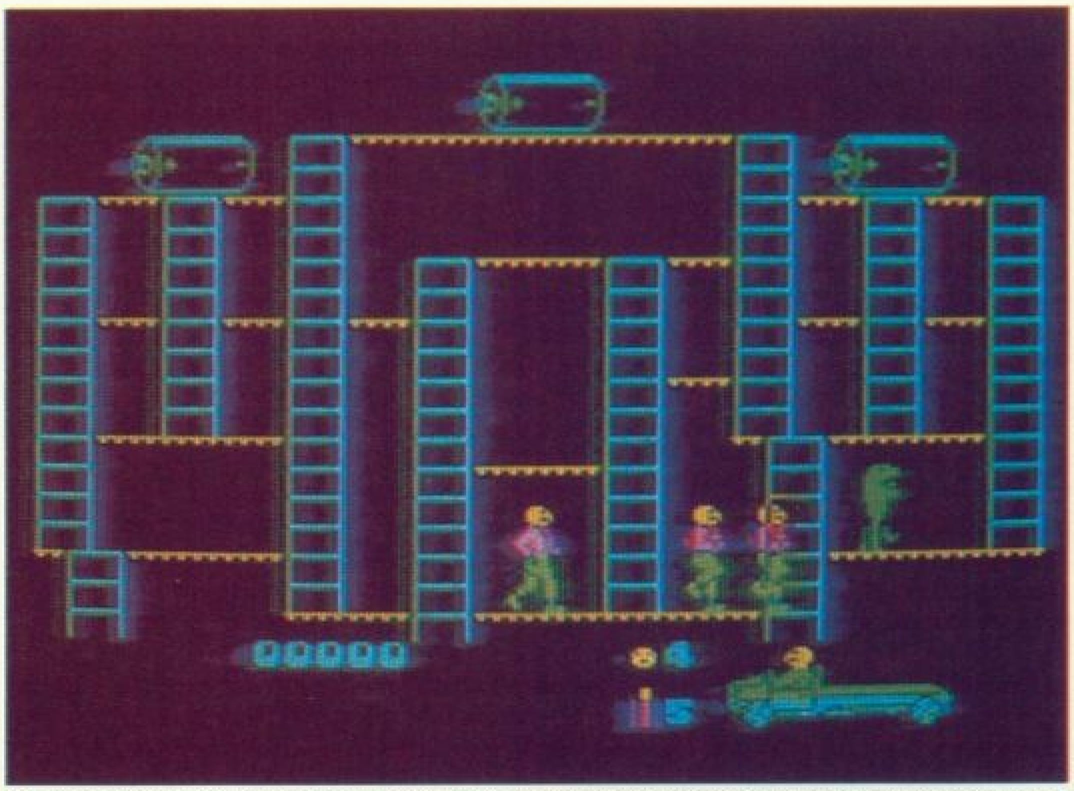
music – where did computer software fit into that definition? The technology was new to lawyers as well; it was difficult to argue a case when it was uncertain whether the medium in question was covered by the Copright Act at all.

Litigation did however follow. Atari was particularly keen to halt the flow of unauthorised versions of its coin-op games, not surprisingly, since Atari was also putting official versions of its arcade games onto its own computers, and planning titles for other micros as well.

In 1982 Atari persuaded Bug Byte to withdraw *Vicmen* (*PacMan* in all but name) from its catalogue and later that year entered into a well-publicised legal dispute with the auld enemy Commodore over the latter's *Jelly Monsters* game, which also (claimed Atari) infringed its *PacMan* copyright.

Honours for the first licensed arcade titles probably lie with Century Electronics. The now-defunct Manchester company campaigned long and hard against unauthorised computer versions and managed, in 1983, to officially license its successful *Hunchback* title to Superior Software for the Commodore and BBC machines, and Ocean for the Spectrum.

A climate approaching certainty of legal action, and the promise of changes to the Copyright Act prompted software companies to look to officially licensing arcade titles in 1984. The advantages of being given access to source code and co-operation from the coin-op manufacturers, plus the publicity gained from being able to openly use the name of the original outweighed the costs involved in obtaining the licence.



Bear Bovver – one of numerous platforms-and-ladders Kong-derivatives. If you think the graphics are poor, just wait till you hear the version of Teddy Bears Picnic that beeps away while you play.

Software houses and their coin-op counterparts have thus had a much easier relationship of late, with home computer versions being actively encouraged. As Nigel Booth of Electro-Coin, one of the UK's largest coin-op machine distributors, points out, 'The two industries complement one another. The public gets the opportunity to play the games in arcades and that stimulates demand for the home title.'

The coin-op manufacturers have also being doing very well financially recently out of home computer verisons, perhaps too well for the vast sums to continue. It is said that US Gold's *Out Run* licence cost them £200,000; the price the same company paid for *Gauntlet* was pushed up and up since the licence was more or less auctioned through the software industry.

Copyright

Prior to the new 1985 Copyright Act, the safest way to argue a copyright infringement in the computer industry was to go by the written word – in the case of software, the actual programming code. Thus in order to infringe copyright, the offending title had to be a copy of a subsantial part of the original's code. Obviously in translating games from,say, a printed circuit board in an arcade cabinet to a ZX81, this definition rapidly became meaningless. The code couldn't remain the same.

An alternative was to try for a 'passing off' action, ie, that the computer game intentionally resembled the original. Just how much the very early computer versions of arcade games, written on 1k micros, did manage to resemble the coin-op original is debatable.

If prices for licences continue to be pitched way above the majority of company's heads, we could well see a return to wholesale cloning – with just enough differences programmed in to make an accusation of copyright infringement difficult to stick. Indeed, it's already happening – there are any number of games on the market today which bear a striking resemblance to *Gauntlet*, *Marble Madness* and others.

The alternative, of course, would be for the home computer industry to follow a path all of its own. This could well happen if the arcade industry, overpopulated with racing simulations and martial arts derivatives, loses some of its impetus and enters another period of stylistic depression. ●

Andy Walker – from the arcades, to the home computer industry, and now back to the arcades with Arcadia.

Costs

To play one of the first *Space Invaders* machines in 1978 cost just 5p per game, compared to between 20p-50p today. However from the arcade owner's point of view, prices have remained reasonably stable. To buy in a *BreakOut* machine in 1975 for an amusement arcade would cost about £1,395; to buy a simple stand up machine in 1987 costs about £1,295; though the price of simulator-style cabinets such as *OutRun* and *Afterburner* approach five figures.

Bet you've never played one of these. This is a prototype Computer Space cabinet – the game Nolan Bushnell designed before Pong.

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GAME OVER?

Coin-op fever is with us as never before. Arcade cabinets, screenshots and logos dominate adverts for home micro games, while the big coin-op manufacturers are now household names. Are pale imitations of coin-op games the best entertainment your micro can offer you? Do even pixel-perfect clones of arcade hits make anything more than mediocre home fare? Andy Wilton investigates...

Once it was film and TV tie-ins, now it's coin-op licences. Even more than cartoon or plastic toy connections, a Taito or Konami logo on the inlay guarantees the success of a home computer game in many people's eyes. If a game isn't a licensed coin-op conversion, the chances are it draws fairly heavily on recent arcade hits for its gameplay.

The connection seems obvious, doesn't it: coin-op and home micro gameplay both aim to provide pretty much the same kind of entertainment, so what works well on the one format must at least stand a good chance on the other – provided it can be faithfully converted, of course. That's the theory...

In practice, however, this kind of attitude is going to have to change. Coin-op gameplay might have been the best you could hope for on a VIC-20 or 16K Spectrum, but the ST and the Amiga are capable of so much more. That's not to say that coin-op games are poor – far from it – but they're designed for arcades rather than living rooms, and there's a big difference between the two.

CASHFLOW

The ideal coin-op game and the ideal home micro game shouldn't have a great deal in common, because coin-op and home game designers are trying to achieve quite different things. There are many constraints on game design for the arcade. First and foremost, good coin-ops must be visually striking and, in the short term, very addictive indeed. They must appeal right from the word go: if you aren't hooked after two or three plays, you probably won't bother with the game again. Each play must be fairly short: if 20p can last you half an hour, the machine can't possibly pay its way.

A good home micro game has to meet a different set of requirements. It'll be judged not only by how addictive it is, but also by how long the addiction lasts. If a coin-op holds your interest for a solid day's play before you tire of it, the game designers have done pretty well. If a home micro game comes apart that easily, on the other hand, it's in for a rough time from reviewers and the sales will probably suffer accordingly. Very few pure arcade titles can manage the lasting interest to justify being released at full price: it takes enormous skill on the part of designers and programmers to hold an experienced player's attention that way.

The problem can only get more pronounced as the 16-bit micros take over. At £19.95, a full-price ST or Amiga game has to offer gameplay that really lasts. With 500K of memory to fill, a 20K scrolling shoot-em-up really won't fit the bill any more.

That's not to say home games are bound to lack long-term interest just because they are converted from or inspired by coin-ops, but if the fun's short-lived it shouldn't come as a surprise. Certainly some shoot-em-ups or racing games will still be worth loading up in a year or so's time, but these ageless classics are rare things indeed: they can hardly justify the hordes of arcade-inspired titles flooding the market nowadays.

What's needed, it seems, is some blend of arcade action with strategy, exploration or

The conversion problem

This has traditionally been a big stumbling block, especially where the Spectrum is concerned. Sinclair launched his world-beater back when *Pacman* and *Centipede* clones were the order of the day, so its colour and scrolling limitations weren't considered serious at the time. The vast majority of colourful, fully scrolling coin-ops since then have not, as a rule, converted any too well.

The rival C64 and Amstrad CPC machines have had their problems too. For a while the C64 seemed the ideal machine for coin-op conversions, what with its hardware sprites and impressive scrolling capabilities, but the quest for bigger visual impact in the arcades has rather left the machine behind. The enormous end-of-level guardians in scrolling shoot-em-ups severely strain the C64's resources, and the head-on perspective of *After Burner* or the *Out Run/Enduro Racer* style of racing games doesn't suit it any too well either.

As for the CPC, its poor scrolling and slowish sprites have made for problems in the past. Coin-op conversions have certainly brightened up a great deal now that programmers and games artists have learned how to use its 16-colour mode properly, but like the C64 the CPC has trouble coping with large sprites or head-on perspectives.

The 16-bit revolution is changing all this, however, with ST and Amiga conversions often being almost indistinguishable from the originals. Indeed, the Amiga can produce arcade-style games to such a high standard that several manufacturers are now producing Amiga-based coin-op machines. There's a great temptation for 16-bit programmers and software houses just to turn out large numbers of coin-op conversions or their derivatives.

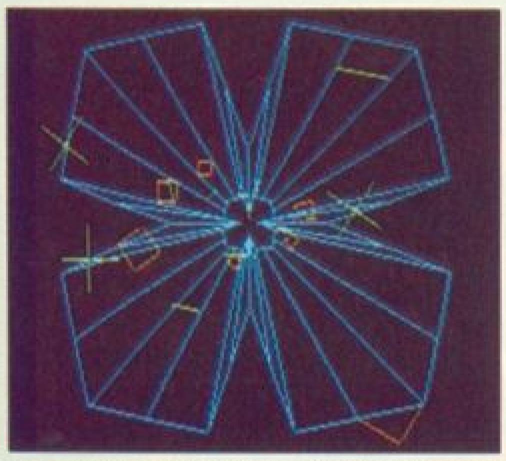
It's a question of economics: there's a shortage of software for the new machines, prices are high, and 16-bit programmers are in great demand. In conditions like these, the vital thing is to turn out games quickly: there's no percentage in thinking up whole new types of game when you can sell ideas you already know inside out.

adventure – an IQ element, if you will. Putting the brains into gameplay is a tricky business, mind you, and recent attempts such as *Star Trek* or *Eco* have been at best only partially successful.

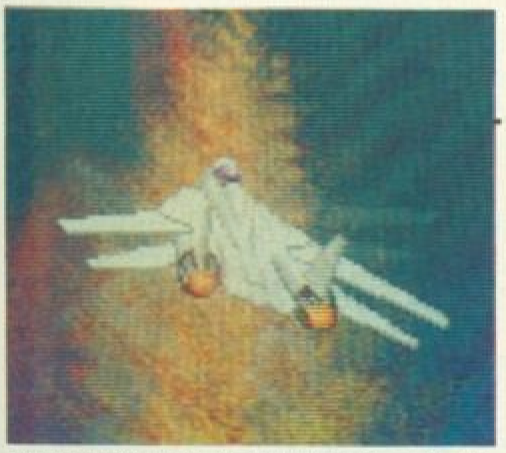
OVER THE SHOULDER

Long-term interest isn't the only casualty of the games industry's arcade-centred view of things. Coin-op economics tend to produce games that lack not only depth but also originality: the reasons have a lot to do with a game's *over the shoulder* appearance, and the effect that has on its success.

As far as drawing in the paying public goes, the main advertising for a coin-op is the machine itself. It's not enough for a game to be staggeringly addictive from the moment you start playing: the machine must get its claws into you the moment you look at it, either in its *attract sequence* – the automatic between-games demo mode – or more likely over someone else's shoulder while it's in use. The spectators round a good machine may just be a distraction, or at best an appreciative audience for the coin-op player, but to the arcade owner they're all potential customers.



TEMPEST (Amstrad CPC): **Despite its manic playability this Atari zap-em-up made little impact on the arcade scene. Moral: abstract coin-ops don't work.**



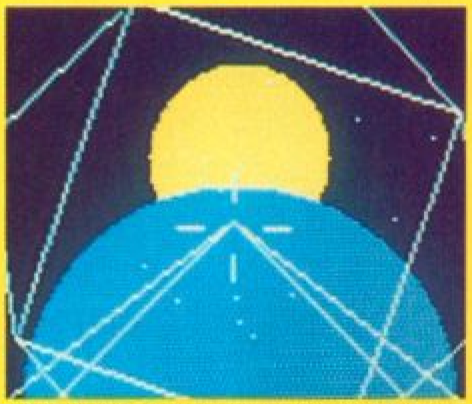
AFTER BURNER (Sega): **Though painfully lacking in gameplay, this swing-winger packs them in anyway with its stunning graphics. Once again, style triumphs over content**

If a game's going to earn its place in the arcade then, it'll have to be a persuasive salesman: first impressions are everything here, and that means graphic power above all else. The phenomenal success of *Out Run*, for example, has as much to do with what the game looks like with someone else behind the wheel as how it plays once you're in the driving seat.

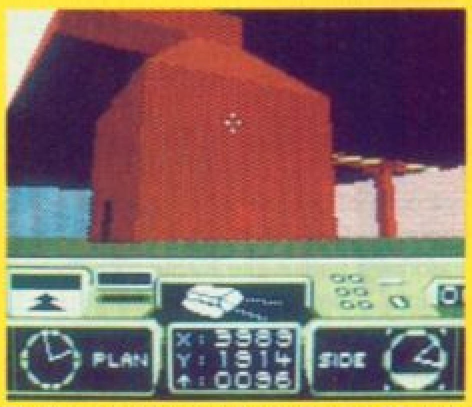
Notice how different this is from home micro thinking, where the player is all-impor-

Games that wouldn't work as coin-ops

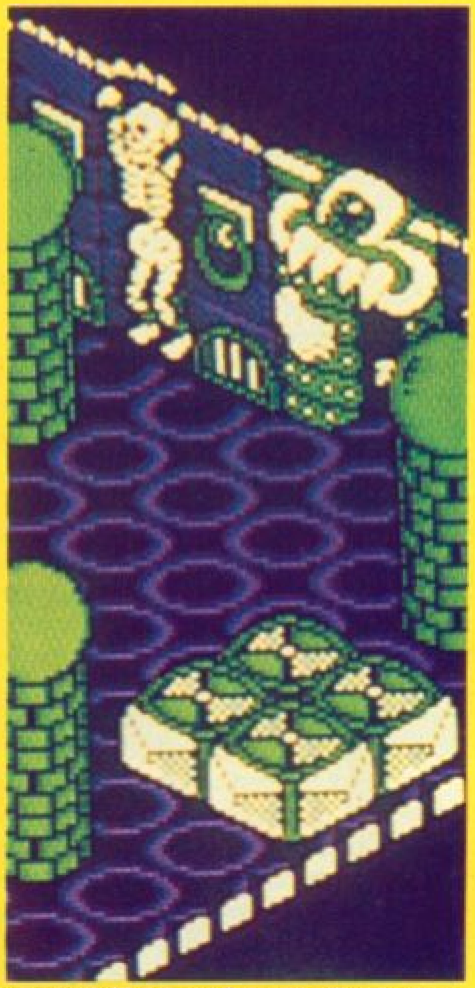
Some of the greatest home micro games just wouldn't work as coin-ops. The fact that they wouldn't shows just how different coin-ops and home games are:



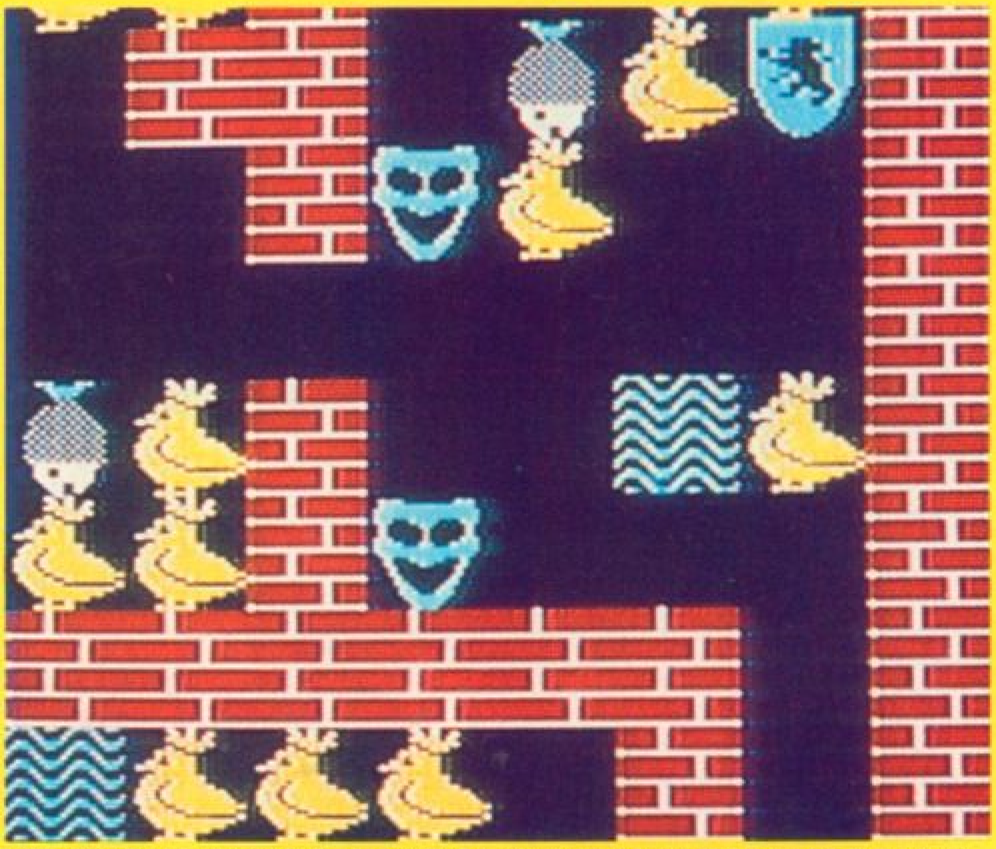
ELITE (Firebird): **Deep-space dogfights might sound like great stuff for a coin-op, but combat's far from simple stuff when it's really 3-dimensional, so the blasting lobby would probably find it too tough to get into. As for the game's underlying trade and exploration structure, it wouldn't work at all in the arcades.**



DRILLER (Incentive): **As an over-the-shoulder game, this one's got a lot going for it – those graphics would draw a crowd in most arcades – but the pacing is all wrong for a coin-op. There's no frantic race against time, and no ruthless opposition hunting you down. The gameplay's all about puzzling and exploration, with the rare bursts of action being for the most part short and to the point.**



HEAD OVER HEELS (Ocean): **Exploration and puzzle-solving on this kind of scale takes time to get into. Gameplay involves a great deal of trial and error, and that's not a wonderful thing in a coin-op game – after all, do you want to lose 50p just because you don't know which blocks disappear or act as conveyors?**



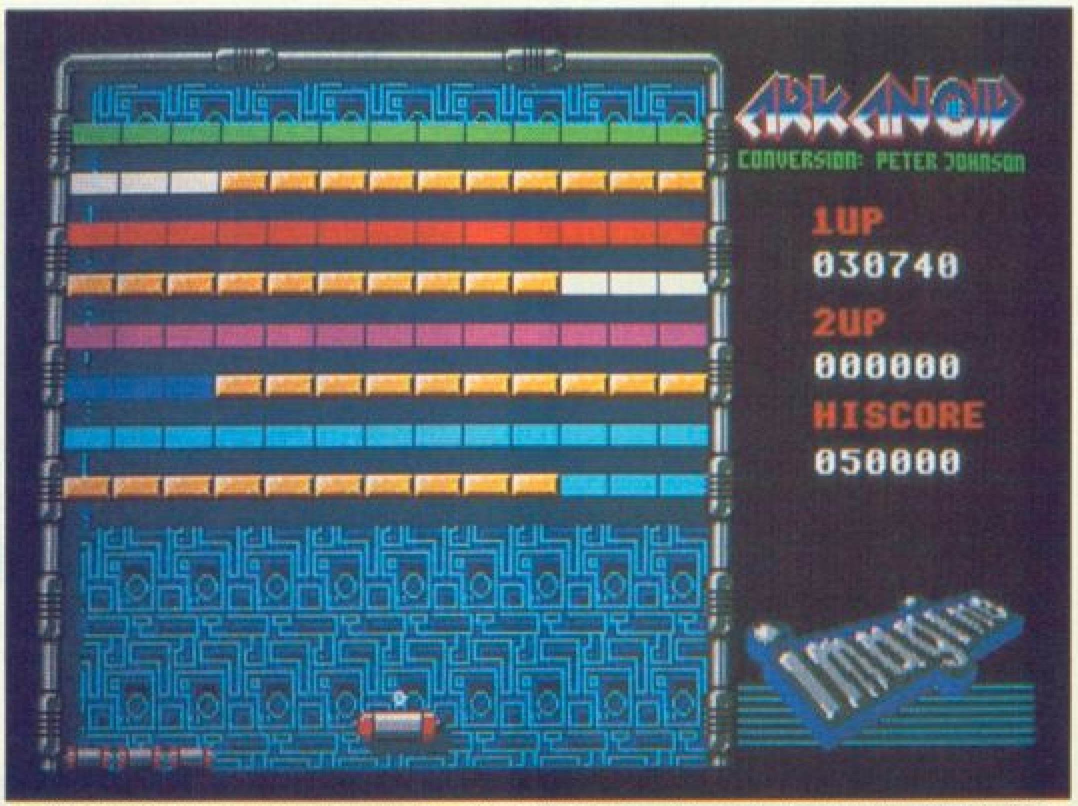
XOR (Logotron): **This game's fiendish puzzles are tremendously absorbing to be sure, but they don't have much in the way of over-the-shoulder attraction. You could spend several minutes watching someone else playing and still not grasp what was going on or feel like cramming some money into the machine yourself.**

tant and the main graphic effort goes into the focus of the action. In coin-ops like *Darius* a great deal of breathtaking background work is completely wasted on the players themselves – they're concentrating on staying alive rather than sightseeing – but then it's not really aimed at them: it's meant to haul in future players, and it does that admirably.

There's a further point here, and one that has some far-reaching consequences. If the game's over-the-shoulder display is the only advert you'll see for the machine, it's also (along with the *attract* sequence) often the only set of instructions you get. That means you'll have to be able to work out more or less how the game works just from watching it played. Few players will risk putting money into a machine they don't understand just in the hope of picking it up as they go along.

For this reason, abstract coin-ops have signally failed to gain popular support. Fine games like *Tempest* and *Qix*, graphically impressive for their time and addictive enough to achieve cult followings, had trouble paying their way just because they were unconventional: it wasn't obvious how to play them, or whether they would actually be fun once you'd got them figured out.

That's not the end of the communication problem. If a machine's got to convince onlookers both that they can play the game straight away and that they'll *enjoy* playing it, innovation's clearly a risky business for coin-op designers. The easiest way to make a game that clears these hurdles is to use an existing game format, improving on graphics and minor gameplay features but keeping the overall idea conventional enough to be (more or less) instantly recognisable.



ARKANOID (Atari ST): **the unreasonably difficult screen three makes great financial sense in the arcades – keep killing them off and they'll just keep coming back for more – but it just seems like poor pacing on the home versions.**

There is innovation in the coin-op world of course, but it usually has more to do with presentation than gameplay. Maverick works of genius like *Nebulus* or *The Sentinel* might be instantly, heart-poundingly enthralling, but you won't find coin-ops with that kind of originality.

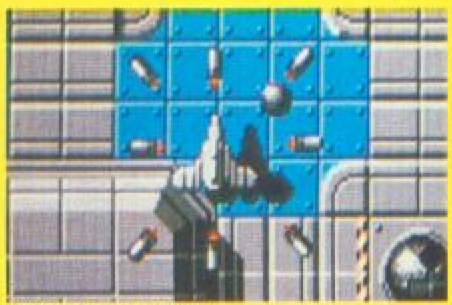
However it happens, the home games industry has to find a direction of its own. If 16-bit games only ever ape the arcades, they throw away the micro's most important weapon in the sales battle against games consoles – flexibility.

There's certainly a lot to be learned from coin-ops as far as presentation and instant addiction are concerned, but the micro games of the future will need a good deal more than that. However they get it, the games must have the kind of lasting interest and originality to justify buying an ST, Amiga or beyond – not to mention the £19.95 asking price – and they won't find that in the arcades. ●

Direct transfer

With the arrival of Amiga-compatible coin-op machines in the arcades, a whole new avenue of 'conversion' is opening up. It's not really conversion at all – you just transfer the coin-op program to an A500 or whatever, and it runs there without any need for modification. In the immediate future we can expect *Road Wars* and *Xenon* from Melbourne House, both of them home versions of Arcadia coin-ops.

This ease of transfer will certainly give home players slicker, better – looking games, but it could create some problems as well. Unless the games are modified somewhat during transfer – the difficulty tuning in particular will need some attention – the games simply won't have the lasting interest a modern game needs.



XENON (Melbourne House)

The two-way street

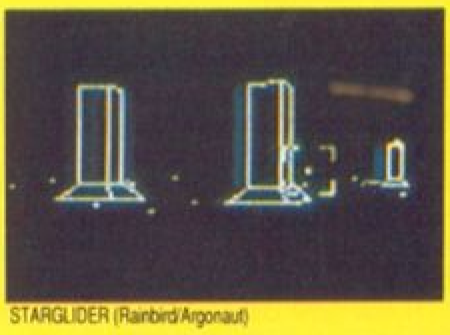
Direct transfer works both ways – if coin-op games will work fine on home machines, home games can be made to run in the arcades: *Starglider* (Rainbird/Argonaut) is a case in point.

When the straightforward blasting action and fast wire-frame graphics of this ST hit caught the eye of arcade giants Bally Midway, conversion to coin-op form was no problem at all. Bally's new series of machines are based on Commodore's Amiga-compatible *B52 boards*, so the Amiga version of the game will run on them almost without modification. Even so, there may still be some need for changes in difficulty tuning and game format, the docking sequences in particular seeing unsuitable for a coin-op as they stand.

Said Rainbird's Clare Edgeley, "It's the first British game to be converted to coin-op form as far as we know, though Broderbund have done the same sort of thing in the States. We'd certainly consider converting other titles to coin-op if they were suitable."

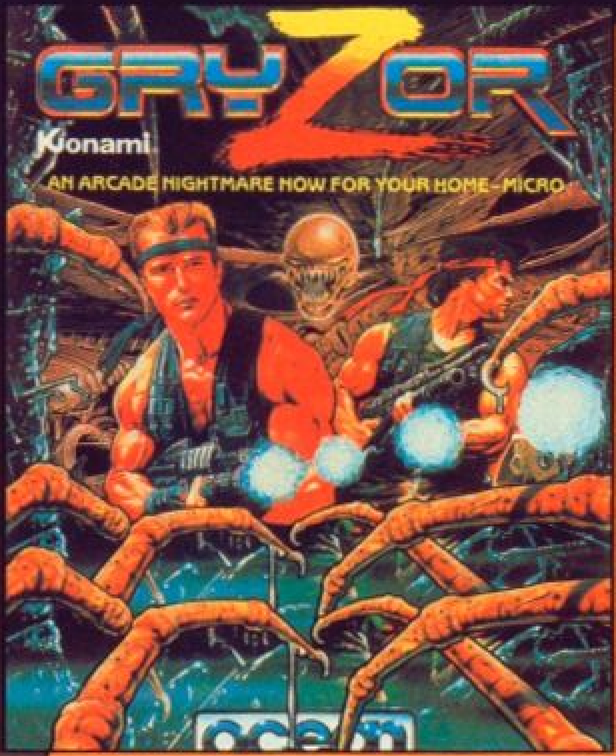
Though startlingly unconventional in viewpoint and controls, Superior's power-processing shoot-em-up *Zarch* has all the simplicity and playability a coin-op fan could wish for. In many ways a *Defender* for the 32-bit era, the game would be hard to beat for over-the-shoulder appeal – if only it could actually reach the arcades, that is. Again, the answer might well lie in the Amiga version currently under development: if the game transfers satisfactorily from its native Archimedes, it could look very attractive to coin-op companies with Amiga-based machines. Not such a fanciful possibility this, considering that Rainbird will be publishing the game's ST and Amiga versions.

ZARCH (Superior)



STARGLIDER (Rainbird/Argonaut)

SOLDIERS OF FORTUNE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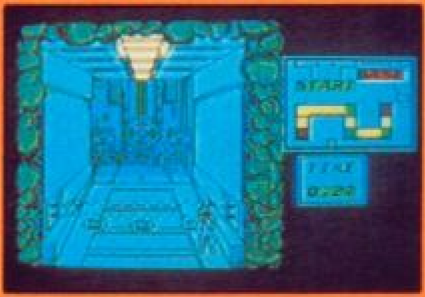

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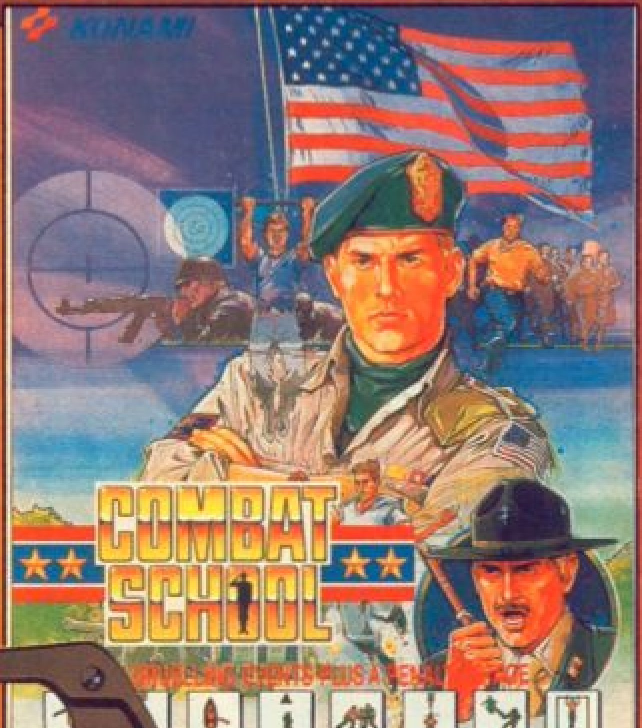
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3d

DAN DARE II
MEKON'S REVENGE

WINTER ISSUE 1955

The story so far . . .

The Mekon has returned, cunning as ever, to take revenge on the Planet Earth. In this bid to become ruler of earth the Mekon has developed a new genetically engineered race . . . the **SUPERTREENS!**

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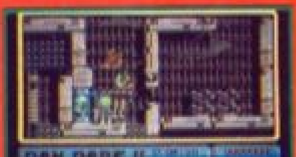
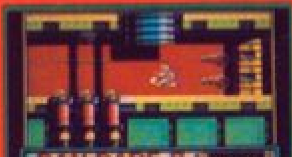
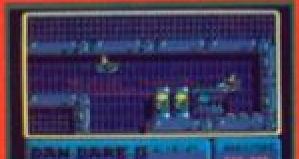


Commodore Screen

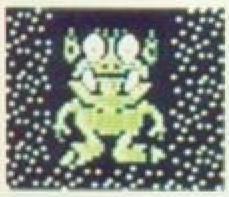


Spectrum Screen



Amstrad Screen

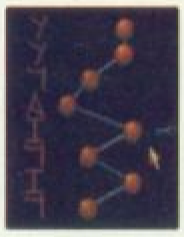
SCREEN TEST



Post-Christmas depression can be lifted simply by taking a look at our Screen Test reviews page. There's loads of good stuff, and those who like a more reflective kind of game will be cheered by the two 900+ programs – Superior's *Bonecruncher* and CDS's *Mah Jong*. *Bonecruncher* racked up a whopping 943, mainly because of its mind-bendingly addictive puzzling. Not to mention its really cute graphics. *Mah Jong* is the best ever computer version of the classic Eastern board game. A lot of folks out east gamble on this game, but you won't be taken for a ride backing an outsider with the CDS corker.

Prettiest game of the month had to be Firebird's long-awaited *Black Lamp*. It really does look stunning. It didn't quite have enough of the Right Stuff in terms of gameplay or control to break the 900 barrier, but it's still an admirable achievement.

Letdown of the month had to be Ocean's *ECO*. Great things had been expected of this Denton Designs game, but there was just a gaping hole where you might expect to find the gameplay...Doubly sad because we'd been so impressed with the preview versions. Well, you can't win 'em all.



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THE ACE REVIEWING SYSTEM

If you're new to ACE, a word of explanation is in order about our innovatory reviewing system.

First off is the **PIC** . PIC stands for **Predicted Interest Curve**; it's an easy-to-see representation of how long we think your interest might be held by a game. Briliant coin-op conversions will start high and then steadily tail off; games demanding some thought and planning will stay higher longer. Naff games start low and go nowhere but down.

The **ACE Rating** is a figure calculated to show the area underneath the curve. It's the game's overall score, and is marked out of 1000. Any game which scores over 900 is 'ACE Rated', and is pretty damn good – see *Bonecruncher* and *Mah Jong* in this issue.

As well as an ACE Rating each separate version of a game reviewed gets its own version box, giving you details specific to that version and a score for graphics, sound, fun factor and IQ factor.

These last two categories are there to give you an idea of whether the game demands much in the way of thought, is instantly enjoyable, packs an exciting punch, and so on. A high **IQ Factor** does NOT necessarily mean that the **Fun Factor** will be low. *Bonecruncher*, for example, scores 9 on IQ and 7 on Fun Factor; it's not only a demanding puzzle but great fun as well.

Release boxes on each review tell you how much the game costs on the different formats, and when they should be in the shops. Bear in mind that we can only pass on what the software houses tell us as to the date of arrival of a game. 'Imminent' means that that version should be in the shops by the time you read the review.

Each game is reviewed by one main reviewer, but is played by at least three of the ACE team; the final ratings and judgement are the considered opinion of us all.

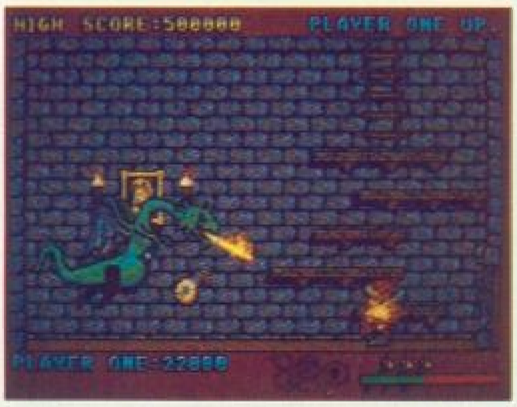
BLACK LAMP

FIREBIRD'S old wine in state-of-the-art bottle

NUFFINK has been spared to make this the prettiest game on the street, guv. Just look at those gor-blimey-whatta-smasher graphics, eh mate? Coo, wot a scorcher of a game...

No doubt about it, *Black Lamp* is a games salesman's dream. It looks stunning and must undoubtedly take the award for prettiest arcade adventure yet, but underneath the beautiful facade you won't find any new ideas. This is a straightforward shoot, search, and survive number in the grand tradition of *Jet Set Willy*, *Sorceror*, and any number of others.

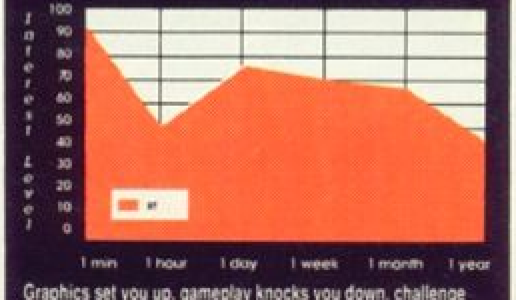
As Jolly Jack the Jester you must find nine lamps of different colours. The display areas are divided into three sections: street scenes, countryside, and building interiors, with outside screens scrolling as you move across them. The interior ones simply cut to a new display as you move from room to room.



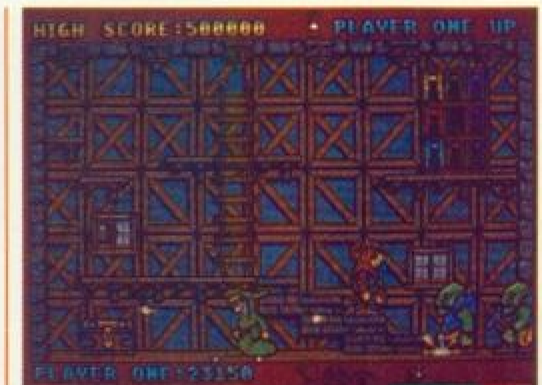
Eeek! A dragon! This one's guarding a dark blue lamp, worth 3200 points if you can survive to get it back to a chest.

The lamps are scattered throughout the screens. You can only hold one lamp at a time and although there are (with the exception of the infamous Black Lamp) duplicates of each colour you need only find one of each, which you then deposit in a special chest before hunting down the others. To help you there are several such chests throughout the game and there is always one in the start location.

PREDICTED INTEREST CURVE



Graphics set you up, gameplay knocks you down, challenge gets you up again and keeps you going.



Frustration – that lamp chest is actually inaccessible. This happens occasionally with random placed objects which can end up out of reach. Very frustrating, especially if it's a lamp or food/drink.

To make things difficult, every screen is swarming with hostile characters, ranging from Slime Witches to hammer-wielding Trolls. Outside you will also be plagued by Werewolves and bomb-lobbing Crows. Every time you get hit by a missile your strength diminishes by an amount that varies with each opponent. By far the worst are the Dragons (each of which guards a Lamp) which require several blows in specific spots to kill them.

To aid you there are four categories of object to be found – food/drink, weapons, jewels, and musical instruments. Food/drink boosts your energy, helping you to conserve your five lives. The other objects have to be collected one by one until you have five of each. Five weapons will give you increased firepower, jewels bestow immunity, and instruments added 'bounce' (which means that you can fall from higher platforms without killing yourself). All these enhancements are temporary, lasting about 30 seconds, and the enhancement comes into effect as soon as the fifth object is collected – so you can't choose when to implement it, which is a pity.

RELEASE BOX

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Black Lamp has a large map and is seething with hostile sprites, so the challenge is considerable. What's more, the location of objects changes with each game and subsequent games become more and more difficult, with faster-moving opponents. Lamps are easy to find, but staying alive to find all nine of them (and defeat the dragon that guards the Black Lamp) is extremely difficult.

All this would make for considerable addiction if it weren't for the frustrating controls. You can forget mouse and keyboard controls (though they are provided) because they're highly impractical, but even the joystick control is extremely finicky. The diagonal directions (always tricky to select quickly and accurately on any joystick) are very important, determining whether, for example, you move left, jump left, or simply walk left according to your position relative to stairs, platforms, or ladders.

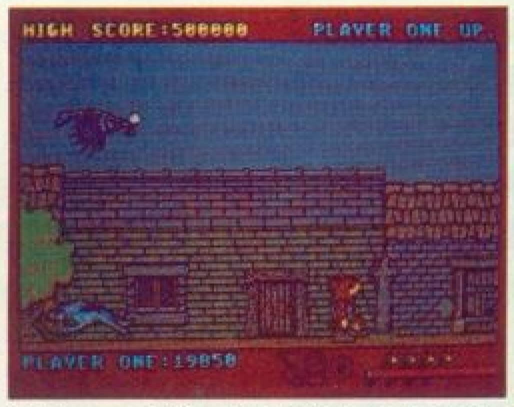
Atari ST Version

Great music (including an excellent rendition of Greensleeves) and stunning graphics make this a visual treat. Gameplay is extremely challenging but joystick controls remain a constant frustration. Not something you'll finish in a hurry, or without uttering vile obscenities every time a slip of the stick sends you to your death.

GRAPHICS	9	IQ FACTOR	2
AUDIO	7	FUN FACTOR	4

ACE RATING 813

Combine the finicky controls with a host of death-dealing opponents and you frequently find yourself dying while attempting to scale a series of platforms. Even after hours of practice you will still find yourself occasionally stepping over the edge of a platform to fall to your death, rather than jumping up onto the next one.



Out in the open. That Crow is about to bomb you with exploding thistledown, and the Werewolf has just taken a chunk out of your energy.

Old game concept, state-of-the-art graphics, frustrating gameplay, great music, enormous challenge...bit of a mixed bag really, but there's no doubt that the salesmen are going to strike it rich with this one. If you like a game that delivers instant visual appeal but exacts a high price for successful completion then join the rush – but don't expect anything particularly original.

● Steve Cooke

BONECRUNCHER

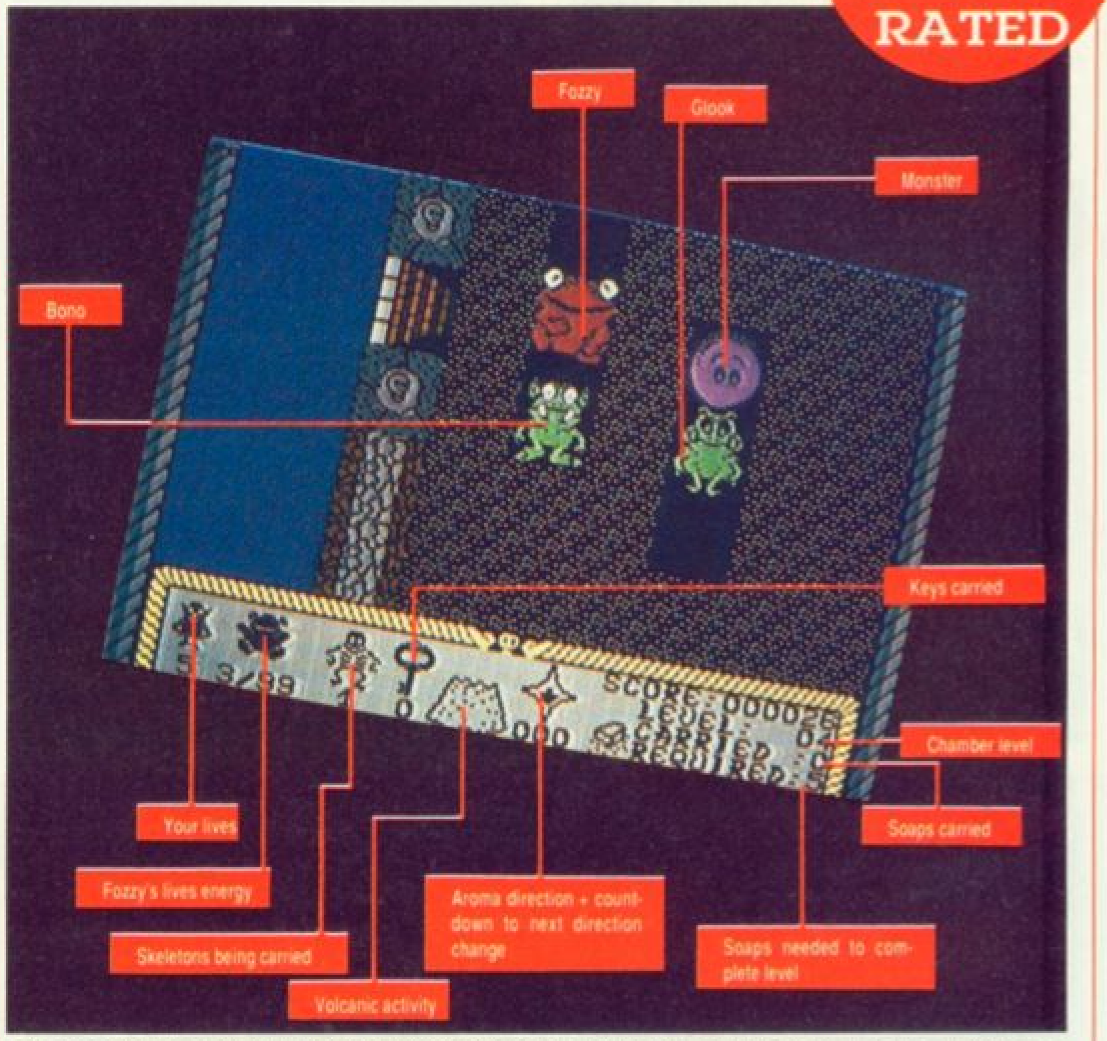
ACE
943
RATED

A very SUPERIOR brain-teaser

WHAT a game! Drawing on the great *Boulderdash* tradition, Superior have managed to come up with a puzzler that's packed with innovative features, truly addictive, and very, very tough.

Young Bono inhabits a block-graphic maze littered with skeletons. The aim of the game is to collect skeletons, make soap by popping them in a cauldron, then deliver the soap (via a stairway) to a collection of affable bathing monsters. In each of the twenty-two mazes of increasing difficulty you must deliver five bars of soap, each bar requiring five skeletons.

Of course these bones don't come easy. Hazards include monsters – usually trapped, but sometimes you have to free them for tactical reasons – spiders (fatal, but unintelligent and easy to avoid), and glooks. The glooks are the most obvious *Boulderdash* derivation, fulfilling the same role as the rocks – they can be pushed around, can crush you, and block your right-of-way.



Here's a typical, but simple, *Bonecruncher* puzzle. The aroma direction is currently South, so moving Bono downwards will cause the monster to follow him, thereby allowing the glook to slide down a square and trap the monster – result: one skeleton.

RELEASE BOX

C64/128	£9.95cs, £11.95dk	OUT NOW
AMIGA	£14.95dk	IMMINENT
BBC	£9.95cs, £11.95dk	IMMINENT
No other versions planned		

The most obvious problem, however, is lack of skeletons. This can only be rectified by exploration, and if that fails (it usually does) by trapping monsters. When confined within a single space, monsters become skeletons, and ripe for soap-conversion. Spiders don't help, however – if they find a skeleton they'll gobble it up.

The game has all the tactical challenge of *Boulderdash*, but also adds some superb refinements that give the game a feel all of its own. The first of these is the 'aroma direction'. *Boulderdash* rocks always fall downwards, but glooks, bless their little souls, always follow the smell of soap. The direction is determined by the last stairway you climbed to deliver suds to ye monsters. Thus if the glooks are currently crowding at the bottom of the screen, perhaps blocking an exit, then collecting five skeletons and delivering them via a stairway that points upwards will soon have them floating up and allowing you to proceed.

You'll also encounter Fozzy, a (rather unintelligent) companion who floats around the maze and can be used to block off monsters or spiders. He dies if he gets trapped (by glooks, for example) and has three lives all of his own. Fozzy adds a whole new dimension to puzzles later in the game – and given his habit of following his own path it can be a highly frustrating one.

You should also keep a sharp eye out for keys (to unlock doors, naturellement), and trap-doors (you lose lives if you fall down them). The latter are very useful if you can lure a monster over one, sending it to its doom – but make sure you don't need to convert the swine into a skeleton to make up your quota for that maze. Last, but not least, are the volcanoes – tread on one of these (unmarked) squares and suddenly the whole place starts filling with glooks – aagh!

There are twenty-two levels to crack and completing each one gets you a password, enabling you to start where you left off if you lose all your lives or reboot. Enough to keep you going for weeks – and believe me, you will be. Even if you've got *Boulderdash*, you should seriously consider *Bonecruncher* – it has a feel and charm all of its own and is desperately addictive. If you're a fan of arcade action then forget it, but for those of us with brains this is as close to a compulsory purchase as we're likely to get.

● Steve Cooke

C64 Version

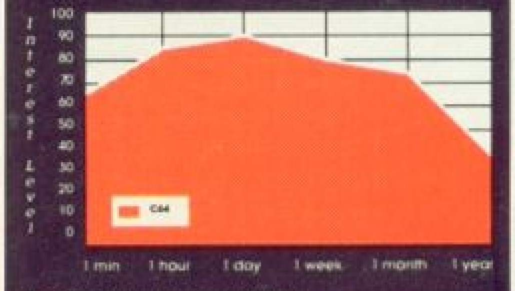
Chaotic music which you'll probably want to turn off, with charming graphics featuring jiving monsters and a Bono who, if you don't touch the joystick, first starts scratching his tummy, then taps his foot, then picks his nose...

Great challenge, easy control, and gameplay that's quick to pick up make this game very hard to put down.

GRAPHICS	6	IQ FACTOR	9
AUDIO	5	FUN FACTOR	7

ACE RATING 943

PREDICTED INTEREST CURVE



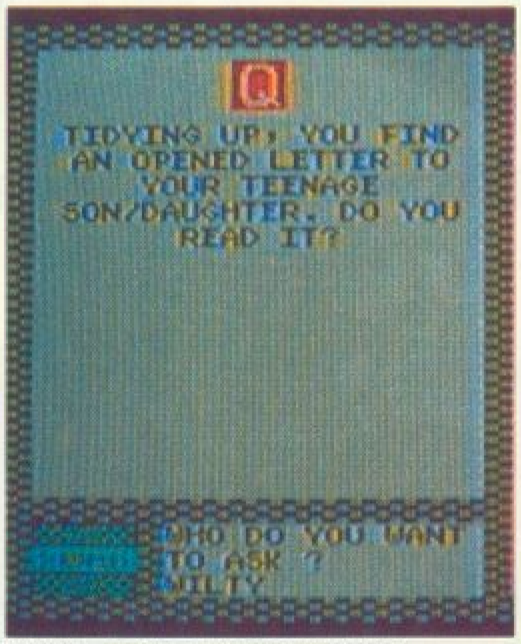
Once it's got you, there's no letting go.

SCRUPLES

Discover your inner self with VIRGIN'S help

MORAL dilemmas are things that most of us spend a great deal of time and effort trying to avoid. This computer version of the successful board game, however, throws moral dilemmas at you, and up to nine other players, constantly.

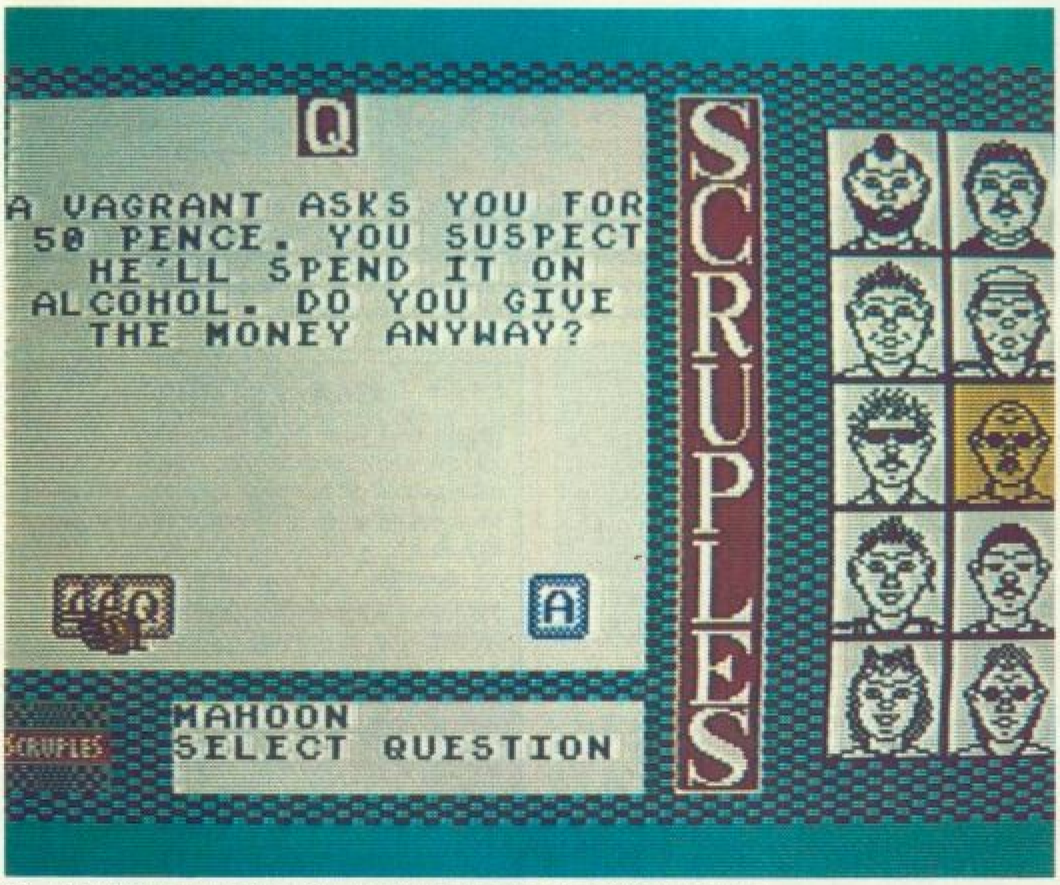
The computer version is a direct translation from the board game, with the rules and objectives remaining the same. The idea is to get rid of all your dilemma cards (3,4 or 5 of them, depending on how many players there are) before your opponents. To begin with, each player receives his quota of dilemma cards and one answer card. The answer card simply has either 'yes', 'no' or 'depends' printed on it, and you have to decide which player is likely to give the same answer to one of your dilemmas as is on this answer card. If the answers agree, you discard the dilemma card and receive a replacement answer card. If the answers are different, then you or any other player can challenge the answerer if you think their reply is out of character. Each player then votes for one player or the other and the winner hands a dilemma card from his pile to the loser.



TIDYING UP: YOU FIND AN OPENED LETTER TO YOUR TEENAGE SON/DAUGHTER. DO YOU READ IT?

WHO DO YOU WANT TO ASK ?
WILTY

SPECTRUM – ooer, it's a tough one to answer isn't it?



A VAGRANT ASKS YOU FOR 50 PENCE. YOU SUSPECT HE'LL SPEND IT ON ALCOHOL. DO YOU GIVE THE MONEY ANYWAY?

MAHOON
SELECT QUESTION

C64 - With a full complement of players (some very dodgy-looking) this game won't be over in a hurry.

If you've enjoyed the board game, or think you might enjoy it, then the computer version will not disappoint. There is enough variety between computer controlled players to make it interesting and there are enough dilemmas to keep even the most upstanding members of the community soul-searching for a long time. The best way to play the game, though, is with a group of friends and a couple of bottles of plonk. Then just sit back and let the computer handle the tedious parts of the game like shuffling and dealing.

● Andy Smith

RELEASE BOX

SPEC 128	£9.95cs, £14.95dk	OUT NOW
SPEC 48	£9.95cs	OUT NOW
C64/128	£12.95cs, £14.95dk	OUT NOW
AMSTRAD	£9.95cs, £14.95dk	OUT NOW
ATARI ST	£19.95dk	OUT NOW

C64 Version

The introduction music is superb, and the animation of the characters is all there. The gameplay and objectives are the same as the other versions and the only problem is the slow movement of the selecting icon. As much fun on the C64 as on any other computer.

GRAPHICS	8	IQ FACTOR	6
AUDIO	N/A	FUN FACTOR	7

ACE RATING 807

Amstrad Version

Gameplay is very smooth and the animation is very witty. Again, all the options are there and it's a straight translation from the board game.

GRAPHICS	8	IQ FACTOR	6
AUDIO	5	FUN FACTOR	7

ACE RATING 807

Spectrum Version

Slightly less animation, but just as much fun. 48k is multi-load while the 128k version loads in one go. Nothing missing from the Spectrum version.

GRAPHICS	8	IQ FACTOR	6
AUDIO	5	FUN FACTOR	7

ACE RATING 807

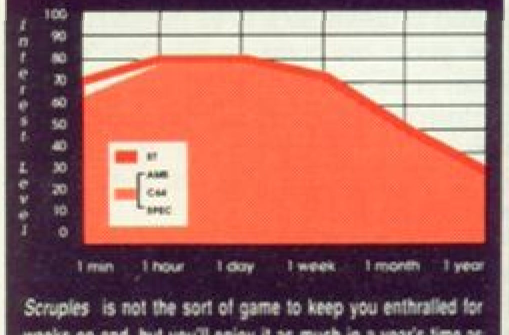
Atari ST Version

The graphics are great and each player's portrait is animated throughout the game, showing expressions of joy, bewilderment etc. Plenty of atmosphere goes to make this version the best of bunch, and the computer is the perfect medium for this type of game. Not a game you'll play solidly for weeks, but certainly one to come back to in the future.

GRAPHICS	8	IQ FACTOR	6
AUDIO	N/A	FUN FACTOR	8

ACE RATING 813

PREDICTED INTEREST CURVE



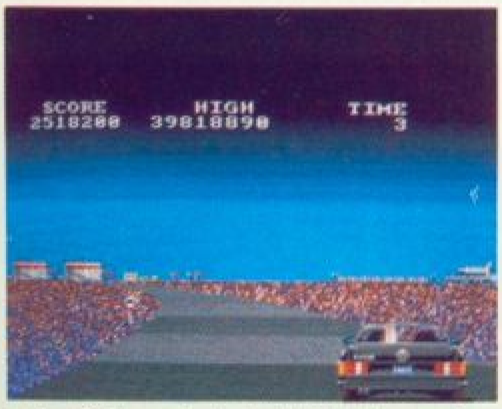
Scruples is not the sort of game to keep you enthralled for weeks on end, but you'll enjoy it as much in a year's time as you do now when you sit down for the occasional game.

CRAZY CARS

TITUS drive like maniacs

RELEASE BOX

AMIGA	£24.95dk	OUT NOW
ATARI ST	£19.95dk	IMMINENT
IBM	£19.95dk	IMMINENT
AMSTRAD	£9.95cs, £14.95dk	IMMINENT
SPEC	£9.95cs	IMMINENT



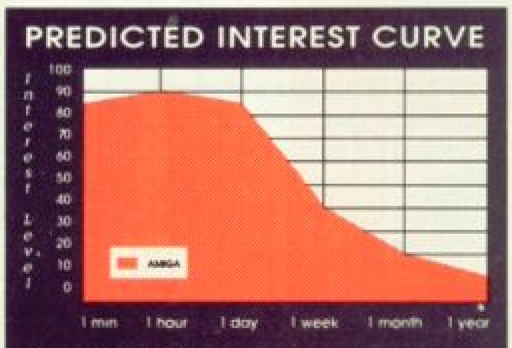
The Space Shuttle run – stopping to admire the view is no way to win the race.

FLORIDA – the sunshine state is the setting for yet another variant on the now ageing drive-a-flash car theme. It's very much an *Out Run* meets *Buggy Boy* type game, and elements from those games can be found within *Crazy Cars*.

If you haven't already guessed the plot then here goes. There are six stages, and each one has to be completed within a time limit before the player can progress from his humble Mercedes via Porsche and Lamborghini to the prestigious Ferrari Testarossa.

The player views the action from directly behind his current car and the twisting roads scroll continually towards the player. As you're up against the clock for each of the stages, it's a good idea to avoid bumping into the other road users or the kerb, because this causes your car to loose speed – thus time. Complete the six stages and you start again from the beginning in a new car and with slightly less time. It's a very addictive game that looks and sounds fantastic. A shame, then, that it's far too easy to be anything like a long-term challenge.

● Andy Smith



Short-lived excitement.

Amiga Version

The graphics are certainly colourful and well drawn but the scrolling is jerky. The only real difference between the cars in the handling and performance department is the addition of a few extra kph for the better models. Without severe time penalties for crashing or back-ending other vehicles the challenge soon wanes, and it can become very boring. Still it's playable and you could find yourself going for the odd spin in a year's time. A brave attempt to combine two very different game styles which doesn't quite work.

GRAPHICS	8	IQ FACTOR	2
AUDIO	8	FUN FACTOR	8

ACE RATING 690

WINTER OLYMPIAD 88

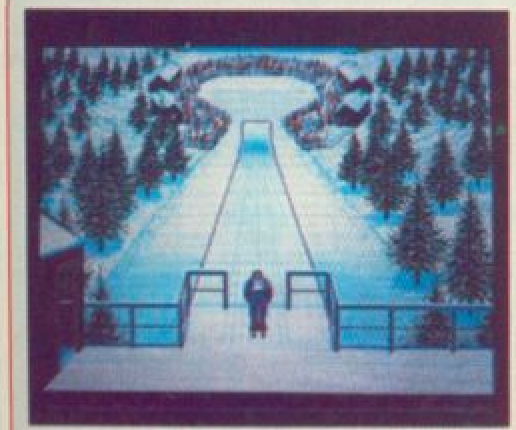
TYNESOFT are Calgary bound

THE 15th Winter Olympic games are the inspiration for this latest Tynesoft offering. There are five events for the player to compete in and the game can be played by up to six players in alternating turns. The object is to win the gold medal for your selected country for each discipline. You have three attempts at each event (except for the Biathlon, where you have only one) and whoever makes the best time/score wins the medal.

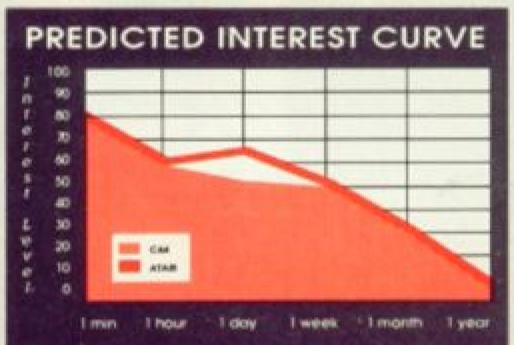
The player's perspective changes for each event – for example, the Downhill section shows your skier in the centre of the screen viewed from behind, while the Biathlon shows your character side-on. The skills the player requires to win each event vary according to the event and it's quite possible to be an expert at one event and awful at another.

If you've ever played *Winter Games* you could well find that *Winter Olympiad* has far too many similarities to be a neccessary purchase. But if you don't own a copy of *Winter Games* and you're interested in the Winter Olympics theme then you may find the game absorbing for a short while at least.

● Andy Smith



ATARI ST .You're at the top of the ski jump. Hit the fire button when you reach the bottom and guide yourself to a gold medal.



The C64's multi-load cassette could have your interest dying rapidly. One for fans of this game genre only.

RELEASE BOX

ATARI ST	£19.95dk	OUT NOW
C64/128	£9.95cs, 14.95dk	OUT NOW
AMSTRAD	£7.95cs, £14.95dk	IMMINENT
SPEC	£7.95cs	IMMINENT
AMIGA	£19.95dk	IMMINENT

Atari ST Version

The graphics for *Winter Olympiad* are superb, but sound leaves a little to be desired. Each stage plays well and requires a substantial amount of practice to complete with anything like a record-breaking score. Dedicated sports simulation fans could find the fun dies off quickly though.

GRAPHICS	8	IQ FACTOR	3
AUDIO	7	FUN FACTOR	6

ACE RATING 610

C64 Version

Great graphics and sound and a tough game to master as well. The C64 version plays in the same way as the ST version, but the multi-load on the cassette version could see your interest waning early.

GRAPHICS	8	IQ FACTOR	3
AUDIO	8	FUN FACTOR	6

ACE RATING 585

OCTAPOLIS

Play the baddie with ENGLISH SOFTWARE

SAVING worlds and rescuing damsels in distress are standard-issue scenarios, so it makes a change to play the baddie and set out to conquer planets that have so far managed to thwart the invasion attempts of the universe's most powerful empire.

Octapolis is the name of an innocent little planet whose secret weapon is the ability to confuse the minds of space warriors and robots alike. The Galactic Imperium is the name of the evil organisation determined to conquer the planet and you are a space pilot for the Imperium. So how come you get to play the wicked uncle? Well, it would appear that Octapolis is *not* able to confuse *your* mind and render you a jibbering idiot, so the Imperium are relying on you to do their dirty work.

The game combines shoot-em-up with platforms, with the shoot-em-up stage coming first. The screen is split into two with a side view occupying the top half of the screen and an aerial view taking up the bottom half. Your space ship scrolls left to right and back again over an Octapolis city and is attacked by various waves of alien craft. The player can decide the speed of the scroll and in which direction to fire. After a while your ship starts to flash, and then it's time to land your craft on the runway (which is conveniently located in the centre of the city). Then comes the platform stage – you control a small on-screen character who has to cross five screens complete with nasties that remove one of your lives on contact.

RELEASE BOX

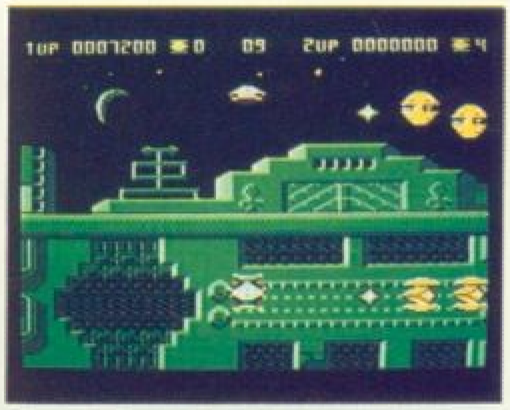
C64/128	£9.95cs, £12.95dk	OUT NOW
No other versions planned		

C64 Version

The graphics, scrolling and animation are superb on the shoot-em-up section but the graphics are a little basic on the platform stage. Sound is very good and atmospheric. A good combination of the two game styles.

GRAPHICS	8	IQ FACTOR	3
AUDIO	7	FUN FACTOR	8

ACE RATING 739

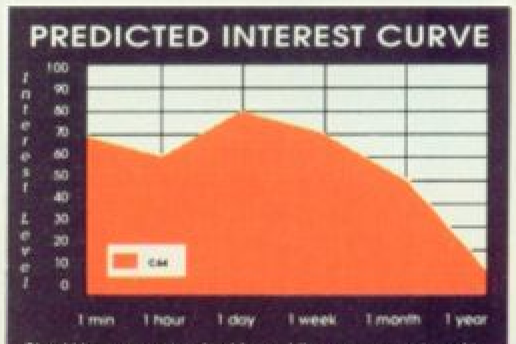


A shoot-em-up section with a welcome difference.

Octapolis manages to combine the two distinct game styles very successfully. The shoot-em-up section is particularly well done, with the two views adding variety. The platform section is a little basic but is still fun.

● Andy Smith

PREDICTED INTEREST CURVE



Should keep you entertained for a while – once you get used to the controls.

TRAUMA

ERE INFORMATIQUE get unoriginal

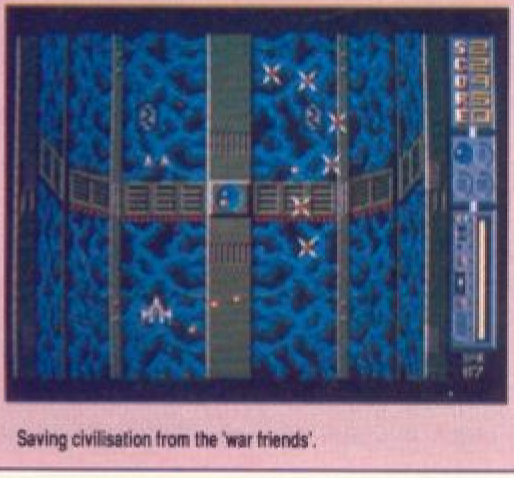
FRENCH programmers may know a thing or two about graphics, but they do tend to produce unconventional game styles that leave British gamesters confused. If you feel tempted to gripe about awkard, irritatingly unusual Gallic gameplay, bear in mind the alternative – cross-Channel software stuck in the same rut as the homegrown article.

Take this latest offering from Ere Informatique for example. It's a vertically scrolling ST shoot-em-up in which you save Earth from 'a world of barbarian war friends' – with friends like that, who needs enemies? – by blasting a path through four levels of their defences. You can pick up extra firepower on the way to help you trash wave upon wave of alien spacecraft. Fight your way through far enough and you'll come up against large enemy ships which can only be destroyed by repeated blasting. Sounds familiar, n'est ce pas?

Admittedly there are quite a few semi-original features to the game – teleports that warp you further up the game map, for example, and nasty blue areas of background which drain your energy if you fly over – but the basic game idea is nothing you haven't seen a hundred times before. Shoot the ground installations, shoot the small aliens, shoot the big aliens and so it goes on.

It's quite playable stuff for all that, and good-looking too. The problem is just that, with so many similar games on the market either at the same price or cheaper, it's very hard to find reasons to recommend this game. Its long sectors might seem like a plus point, but in practice the gameplay is undemanding enough that you can plough on through them without too much difficulty. The result is that, as with so many other games in the genre, you can see all you want to quite easily.

● Andy Wilton



Saving civilisation from the 'war friends'.

RELEASE BOX

ATARI ST	£19.95dk	OUT NOW
No other versions planned		

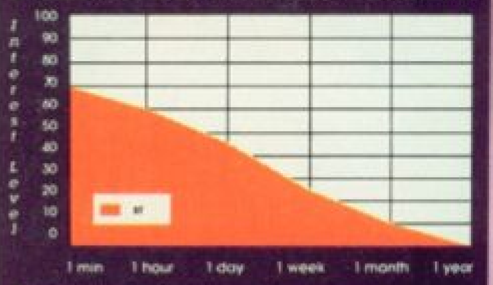
Atari ST Version

The backgrounds and sprites are finely detailed almost to the point of being fussy, but this aside it's quite unremarkable: the ST's cup runneth over with stuff like this.

GRAPHICS	8	IQ FACTOR	1
AUDIO	5	FUN FACTOR	5

ACE RATING 432

PREDICTED INTEREST CURVE



Pretty to look at, but boredom sets in soon enough.

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FIERY ACTION

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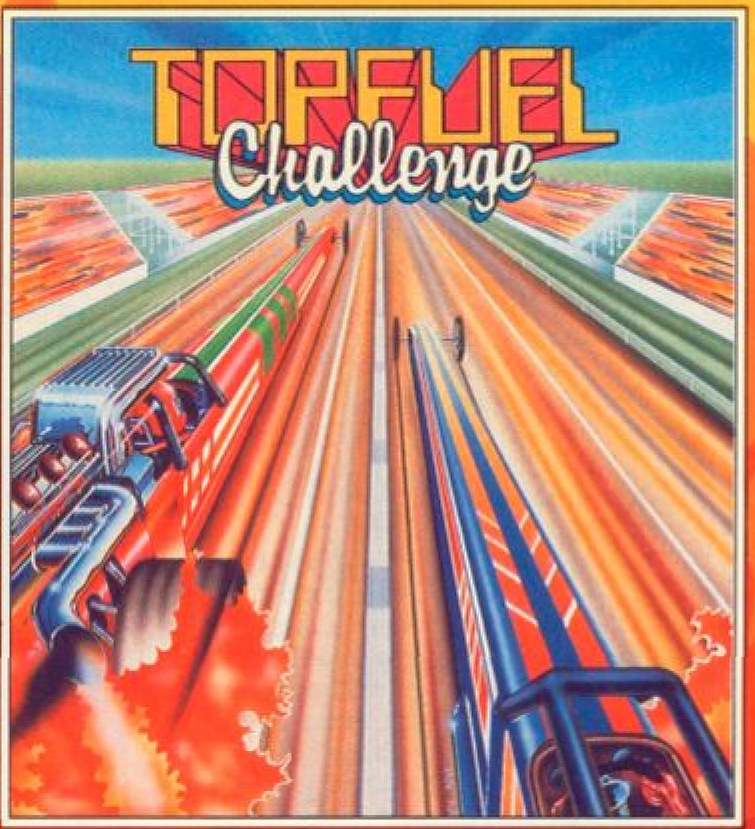
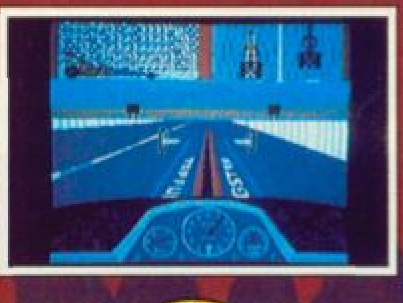


Jump to the smell of burning rubber as you "burn-in" your tyres. Recoil from the heat of your turbos as you gun your engine. Feel the snap of the G Force as you release your clutch.

This is the world of drag racing as recreated by Shirley Muldowney, 3 times world champion in Professional Top Fuel Dragsters. Tensely wait for the Christmas tree lights, then pop your throttle and power your way down the 440 yards in head-to-head challenge with Shirley in one of her best championship races.

But be careful. Don't red light, smoke your tyres or blow your engine ... there's a long season ahead.



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HUNTER'S MOON

THALAMUS attack the workers

COMPARISONS aren't always helpful, but mix Ocean's oldie *Mutants* with the Tholian Web from the TV series of *Star Trek* and perhaps you'll catch some of the flavour of this new 8-way scroller. Programmer Martin Walker has you lost, light-years from home, with vast numbers of strange alien structures between you and your loved ones.

To get back home you need to fight your way through 16 star-systems, each one divided into several separate levels. It's not a straightforward shoot-em-up by any means (though blasting certainly plays an important part) partly because your main aim is to collect each level's vital starcells, and partly because your real opponents – alien workers – are indestructible. The workers are little white blobs which orbit the starcells, weaving colonies of protective cells around them.

At first, the colonies simply act as physical barriers – fly into them and your ship explodes, costing you a life – but as you loiter near them, or actually try and blast your way in, you'll find they turn decidedly nasty. Those colony cells nearest your ship turn into defensive installations, firing deadly glowing spores at you. This is bad enough while you're outside and can manoeuvre freely, but as you blast through the colony wall to grab those starcells the all-round fire can get very hairy indeed.

Later systems have guided spores and other nasties to fire at you, but you'll face a much larger problem right from the word go: though you can blast through individual colony cells, this won't stop the workers doing their job. This job of course is to carry on orbiting the colony, repairing damaged cells along the way. Collide with a worker, or crash into repaired cells where you expected a previously blasted hole to be waiting, and you'll have to start the level again.

Timing, then, is of the essence, and so is momentum: collecting a starcell gives you a temporary shield against those nasty spores, so pressing on with the next attack run can be a lot safer than getting your breath back. The tactics you evolve here are all about stringing attacks together, or clearing out multi-starcell colonies in one movement. Of course you've still got to get into the first colony of each level somehow, though even here unguarded starcells sometimes get you off to a flying start.

If the tactics of *Hunter's Moon* are interesting stuff, there's a strategic side to things too. On completion of each system you'll get the chance to earn a bonus life by defeating eight attacking workers in a little sub-game. There are eight different sub-games and the one you play each time is selected at random, but they all run on the same lines: blast the workers (at last!) before they ram or spore you.

Win or lose the sub-game, you still get an extra perma-shield at the end of each system – and this can be a good deal more useful than a bonus life. Perma-shields offer the same spore-protection you get when you collect a starcell, but last for the duration of a level. They don't become active the moment they're collected: it's up to you to choose which levels to use them on. Like time bonuses in *Quedex*, perma-shields add depth to the gameplay by facing you with long-term decisions early on. Add the instant appeal of the unusual action plus a sizable – 128 level – game task and you've got something of a winner.

● Andy Wilton

RELEASE BOX

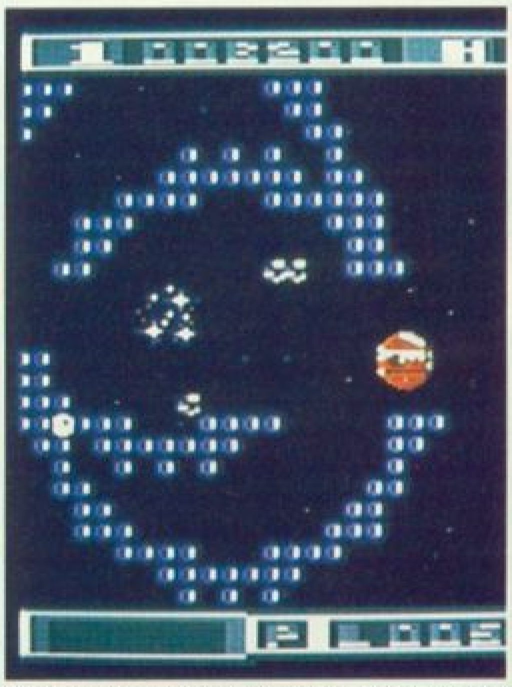
C64/128	£9.99cs, £12.99dk	OUT NOW
	No other versions planned	

C64 Version

Music and sound effects are high-grade stuff, and those alien colonies are graphically very striking too. It's unusual, and well worth a look.

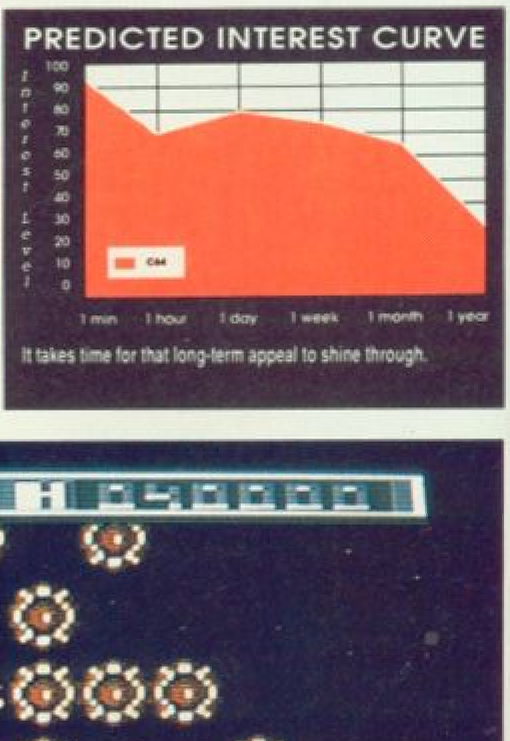
GRAPHICS	8	IQ FACTOR	4
AUDIO	9	FUN FACTOR	8

ACE RATING 863

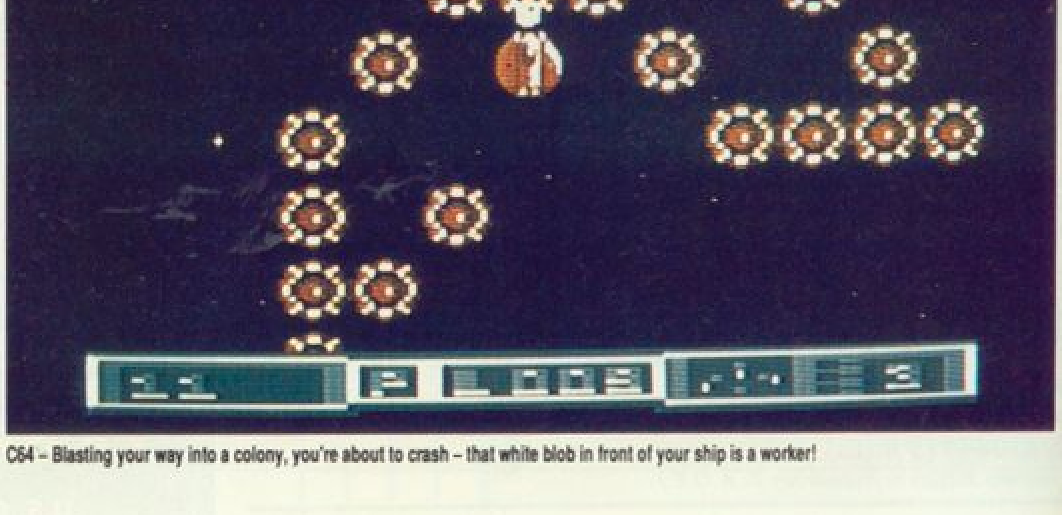


C64 – Guns blazing, you carve your way into a colony to grab the starcell within.

PREDICTED INTEREST CURVE



It takes time for that long-term appeal to shine through.



C64 – Blasting your way into a colony, you're about to crash – that white blob in front of your ship is a worker!

ACE

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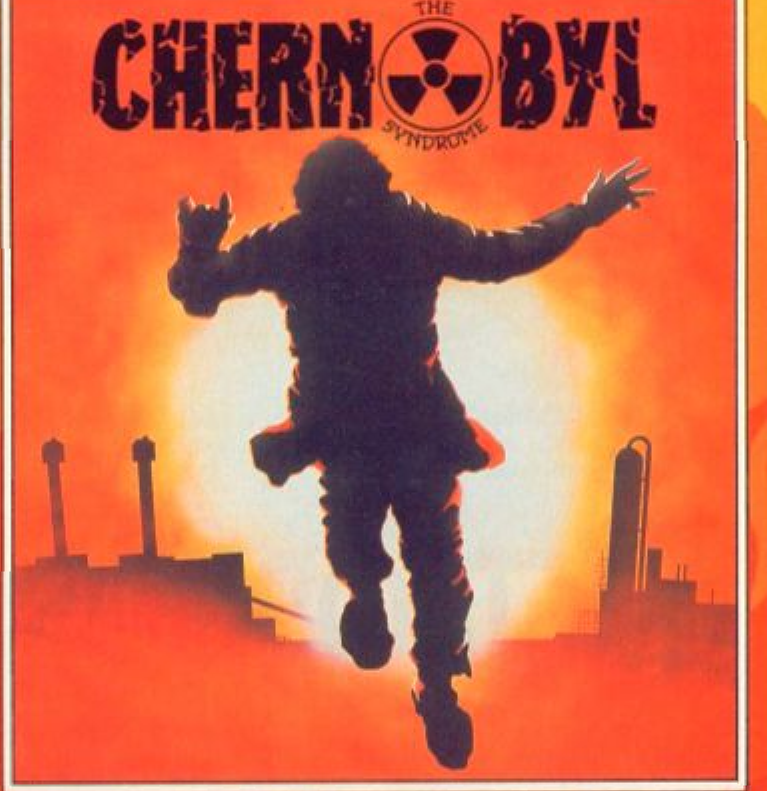

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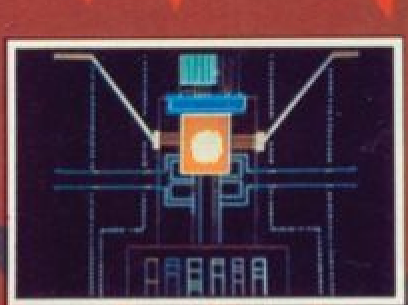

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TANGLEWOOD

MICRODEAL'S text-less adventure

RELEASE BOX

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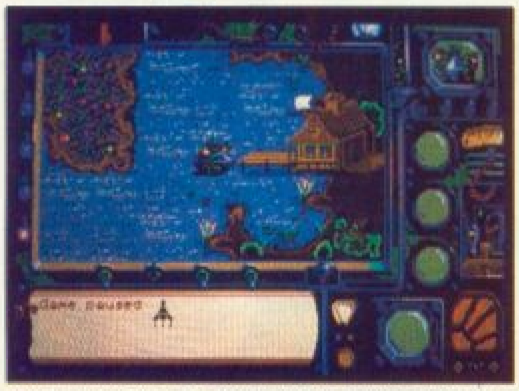
No other versions planned		

DODOS seem to be something your uncle has a knack of investing in. His latest venture had him buying the mining rights to a distant planet which everyone thought was barren. Only when the planet started to reveal its true worth did a rival mining company muscle in and steal the documents that proved your uncle owned the sole rights.

It's up to you, then, to recover the documents with the aid of five mobile robots that you control individually. These mobiles are controlled using the mouse, and the idea is to guide them across the planet along little pathways. Occasionally, the mobiles will have to make an underground trip through one of the several mines on their quest, or wander through some strange forest or vault.

Various objects are to be found around the planet, and it's up to the player to discover their uses. This arcade adventure will not appeal to everyone's taste, but if you've been put off adventure games that require text input, then *Tanglewood* could well be worth a look. The game is complex enough to keep even the most experienced arcade adventurer puzzling for quite some time.

● Andy Smith



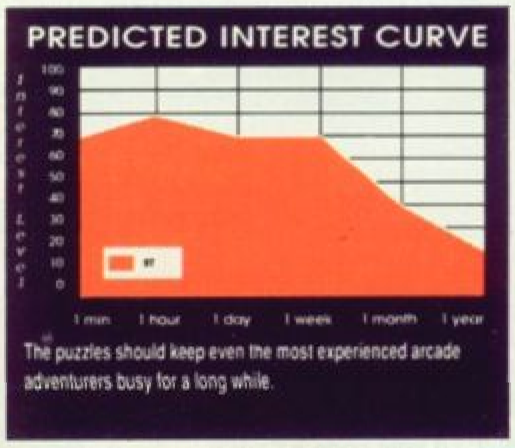
Mobile number five – the only one with the ability to travel across water. Very helpful indeed.

Atari ST Version

The graphics are superb. The animation is smooth, and colour has been well-used. Control is extremely difficult though, and not something you can perfect to any great extent – which is a shame. Sound effects are sparse but good, and if you enjoy a challenging arcade adventure, then Tanglewood will provide you with one.

GRAPHICS	8	IQ FACTOR	7
AUDIO	5	FUN FACTOR	7

ACE RATING 752



The puzzles should keep even the most experienced arcade adventurers busy for a long while.

METROPOLIS

City adventures from MASTERTRONIC

SORDID things go on in cities, and the eponymous Metropolis (a city called City?) is no exception. In this case, someone's nicked a master tape and it's up to you to get it back.

Metropolis is no ordinary city; its denizens are all of the robotic race. They're courteous and helpful, but they do tend to be a little on the stupid side. You've got to do your best with them, though, since the only way to get the information you need is to ask them for it.

Metropolis is an arcade adventure. You are represented trolling around the city, and can question robots by typing text into a speech bubble. Ask the right robots the right questions and you might get a meaningful answer; ask the wrong question and Police Droid 3 (or perhaps Lighting Droid 5) could well reply with a conversation-stopper such as 'Is it normal for humans to a tourist?'

Metropolis the city has 16 physical levels, while *Metropolis* the game has 10 levels of difficulty. You move around the place by means of walkways and lifts, in a manner not unreminiscent of Gargoyle's games. On the first level you are held by hand and shown the ropes; a robot leads you to where you get your first info and essential MUM Code (with which you can buy Plasma Burgers etc.). From then you just follow one lead after another.

There are several problems with the game. Even though you're virtually told what to do, it can be tricky actually getting through to level 2. Its graphics are initially pleasing, and the techno-nightmare of Metropolis tolerably witty, but you ultimately find your investigations getting a bit tedious.

● Pete Connor

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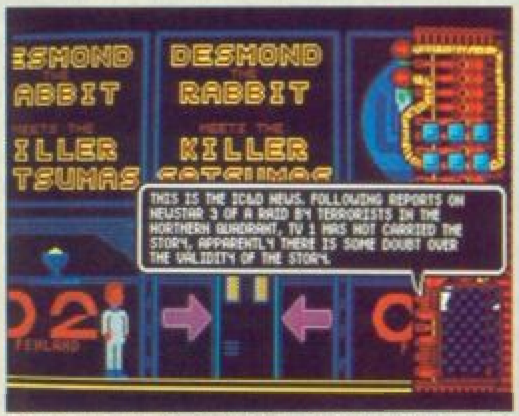
IBM PC Version

There's one huge drawback to *Metropolis* on the PC; unlike the forthcoming ST and Amiga versions, there is – inexplicably – no Save Game option. This means that each time you play the game you have to start right from the very beginning and follow each step in exactly the right order. Even knowing it backwards, it's going to take you a good 10 – 15 minutes to complete. This could surely have been overcome by the simple expedient of giving the player, on solving the level 1 crime, a code to access the next level. Graphically, the game looks pretty good, with suave use of colour and some neat animation.

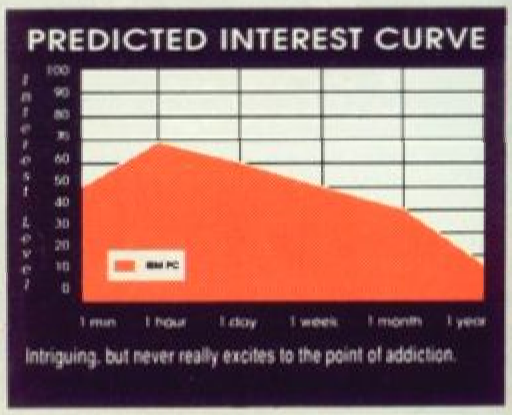
GRAPHICS	8	IQ FACTOR	7
AUDIO	8	FUN FACTOR	3

ACE RATING 622



THIS IS THE ICAD NEWS. FOLLOWING REPORTS ON NEWSTAR 3 OF A RAID BY TERRORISTS IN THE NORTHERN QUADRANT, TV 1 HAS NOT CARRIED THE STORY. APPARENTLY THERE IS SOME DOUBT OVER THE VALIDITY OF THE STORY.

Trolling round the city, interacting with droids and listening to those newscasts.



Intriguing, but never really excites to the point of addiction.

ECO

OCEAN put their genes on

BIRDS do it, bees do it and now it seems even Denton Designs are doing it. We're talking about evolution here, fellow life-forms, and the quest for a body that can survive and reproduce in its environment. But don't imagine the program's a heavy-weight Darwin simulation with a foot-thick manual: a less scholarly piece of work it'd be hard to imagine.

For most of the game's playing time you use joystick or mouse to control a lifeform's attempts to feed, mate, and avoid getting eaten. Starting as a small, six-legged animal (winged or otherwise), you'll first of all have to find food, and quickly. You can track down a suitable meal – a tree shoot perhaps, or a nice tasty slug – either manually, or by using your creature's homing instincts. The latter only work at close range, so you'll have to get 'in the ballpark' for yourself – even so, they tend to make things a bit too easy. If you fail to reach food it's game over there and then, but if you make it you'll instantly reach adulthood.

Having successfully come of age, your next task is to reproduce. For this you'll need to find a mate, but in this rather over-simplified scheme of things any other creature of your species will do. The mating game is pretty similar to the feeding game, consisting of a visual search backed up by homing instincts at close range. Your scanner – a radar-like instrument presumably corresponding to a sense of smell – comes in handy here for spotting potential partners at a distance, but for the most part you can find a mate quite successfully by sight alone.

Once you've flown up to your intended, *Eco* neatly sidesteps the act of mating by switching to an icon-driven genetic engineering screen. Here you can juggle your creature's eight genes to produce an offspring with different characteristics. At first you can only alter one of the eight, but with each successive generation another gene is 'unlocked' until after eight generations you've got total control over the shape of your descendants.

By altering the settings of the genes – each can have any one of eight values – you can give birth to birds, dog-like carnivores, slugs, scorpions, trees or rather human-like bipeds. As you make adjustments, you can see the effects they'll have on the finished organism: these can be complex, as the genes interact confusingly. If you can't decide quite what sort of creature you want, click on the dice icon and you'll randomly alter all unlocked genes, giving you a pot-luck offspring.

Once you've got the hang of this, and survived long enough to unlock all eight genes – not terribly difficult, to be honest – you've seen just about all the game has to offer. Survival is fairly tedious once you can create any organism you want, and there doesn't seem to be any other object to the game. There you are after nine generations, all dressed up and nowhere to go: you can be anything you want, but what's the point?

To put it mildly, *Eco* is a disappointment. Wire-frame animation, slick presentation and really usable icons make a great first impression, but this soon wears off as the total lack of lasting gameplay becomes apparent. Early versions of the game promised so much, but the finished article really wouldn't hold anyone's attention long enough to offer value for money.

● Andy Wilton

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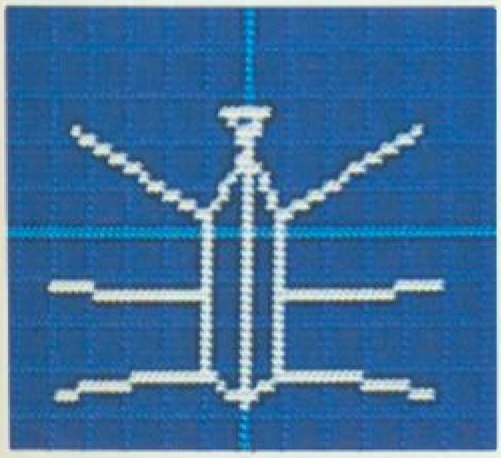
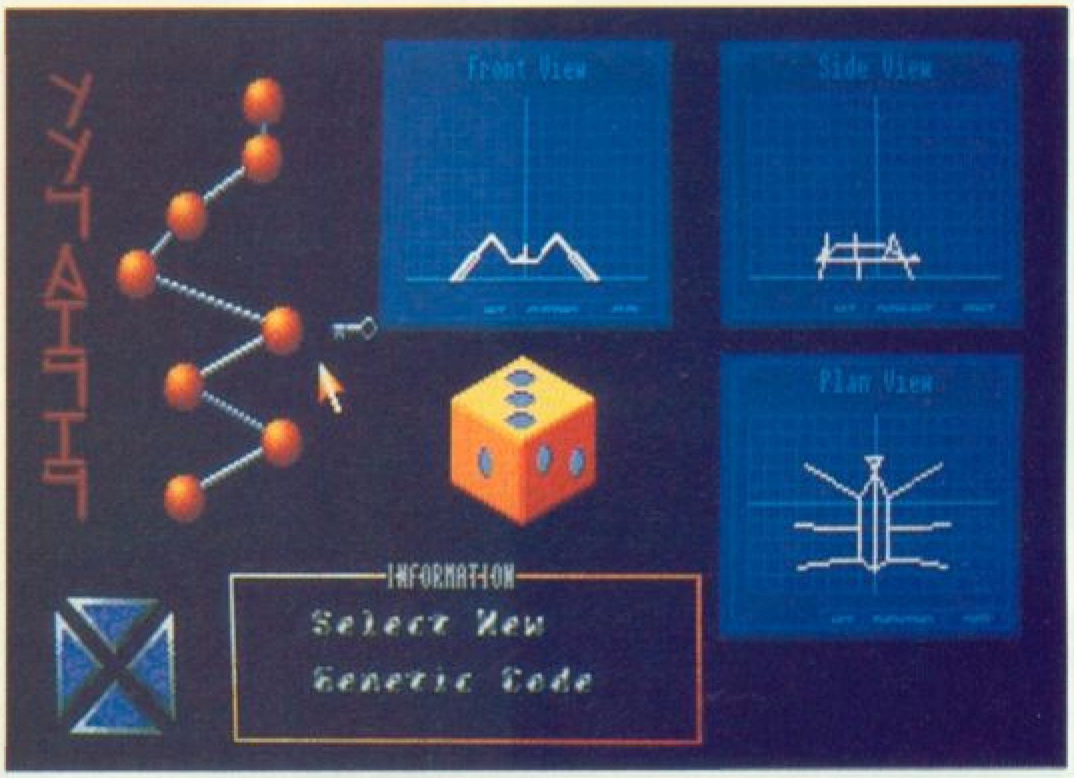
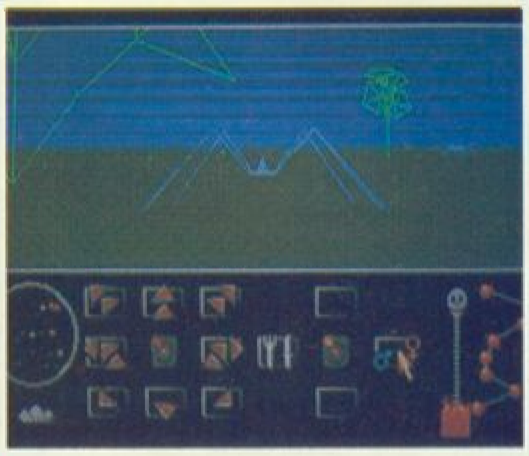




Select New Genetic Code

ECO (ST): **Move the genes (left) using the pointer, until your creature (right) looks the way you want it to.**



ECO (ST): **You've had a nice meal and reached adulthood, so now you just need a breeding partner.**

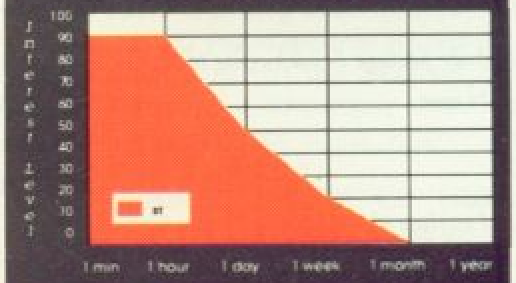
Atari ST Version

The wire-frame fauna move well and the icons are glowingly colourful, but no amount of graphic flair can fill that size of gameplay vacuum.

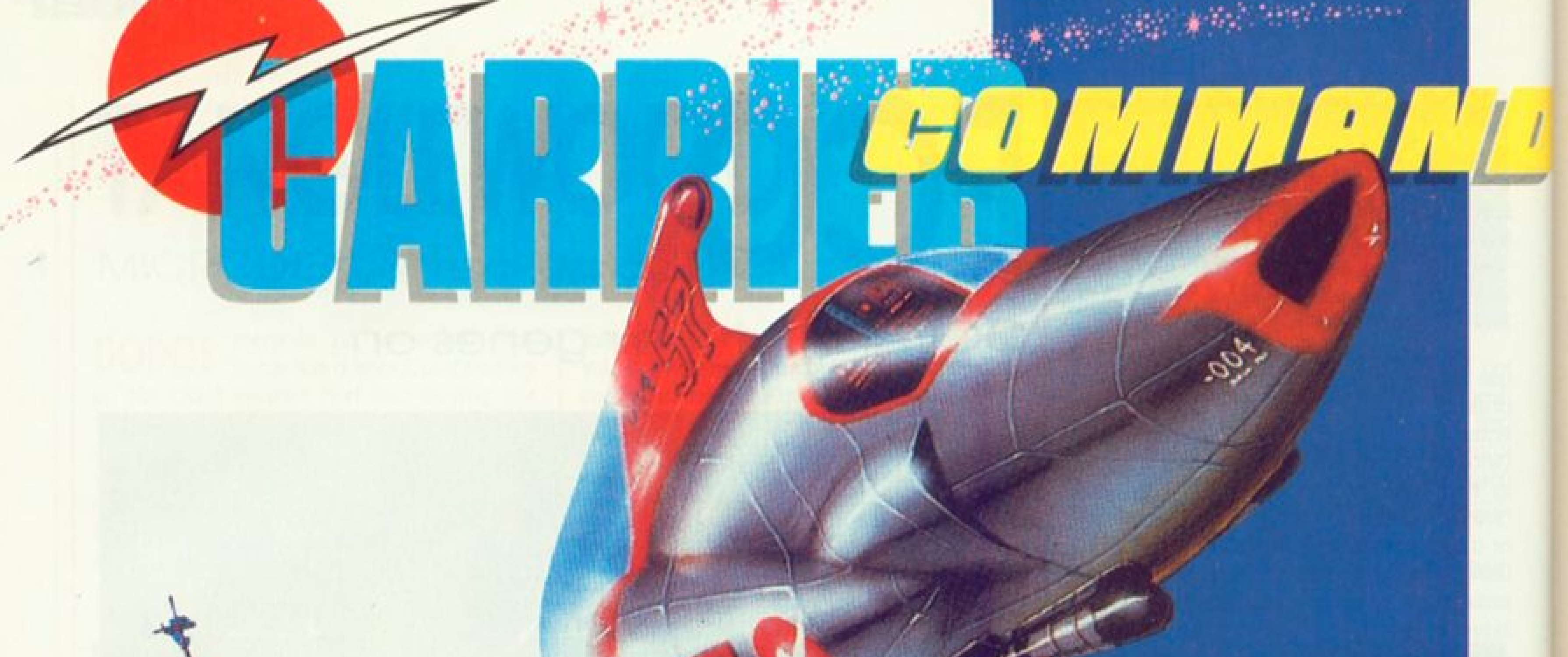
GRAPHICS	9	IQ FACTOR	4
AUDIO	5	FUN FACTOR	3

ACE RATING 511

PREDICTED INTEREST CURVE



It looks terrific, but after a little feeding and breeding, the gameplay just evaporates.



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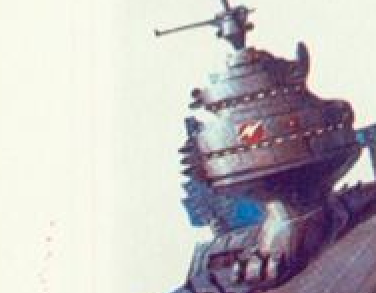

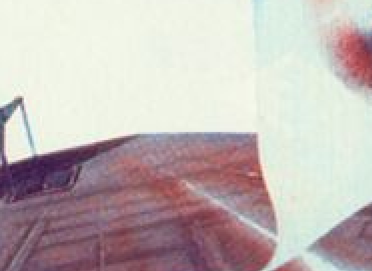

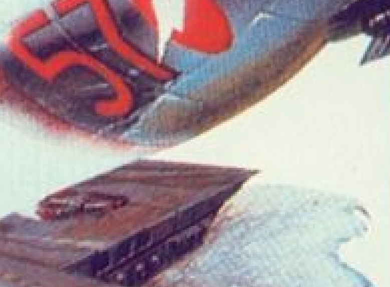

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RAINBIRD

MASTERS OF THE UNIVERSE

GREMLIN present He-Man

OUR Lord gave us Christmas, Cannon gave us the movie, and now Gremlin have come up with the turkey.

Masters of the Universe takes place on a sizeable city map, across which your small HE-MAN figure makes his way, blasting SKELETOR's henchmen, who materialise on each screen and pepper him with bullets. Your strength drops each time the baddies score a hit and can only be replenished by picking up the occasional sword found in the street. Your objective is to retrieve 8 'chords' before confronting SKELETOR.

The action is about as uninteresting as it could possibly be, but to save the game from instant consignment to the rubbish bin there are other scenarios. For example, every so often a small panel flashes onto the screen, showing one of your two companions TEELA and GWILDOR. They will give you a brief, scrolling message, telling you where they are and inviting you to join them. Get there in time and you'll be propelled into a game-within-a-game to alleviate the monotony.

Unfortunately, these mini-games are pretty atrocious as well. One of them features a punch-and-kick combat sequence. It's slow, unconvincing, and unexciting. There's also a 'shoot-out', which puts a cursor on the screen that you move over the front of a building, shooting figures that pop up in the windows before they shoot you. Hardly original.

Other scenarios include a 'disc battle', which has you flying around the streets, shooting air-borne assailants, and the final confrontation with SKELETOR where you have to shove him into 'the abyss'. Neither of these is likely to have you on the edge of your seat with excitement.

What you're left with then is a lot of *Robotron*-style shooting, in eight directions only, against unintelligent opponents, and spiced up with the occasional change of scenario. Gameplay is appalling, with the direction of North changing each time you flip screens, forcing you to re-orient yourself constantly. The action on the Spectrum and Amstrad versions is desperately slow. Furthermore, the graphics on all versions are uninspiring and repetitive.

It's debatable whether this product should ever have been on sale in the first place, but the best thing for Gremlin to do now would be to bin the entire stock and start work on something better.

● Steve Cooke

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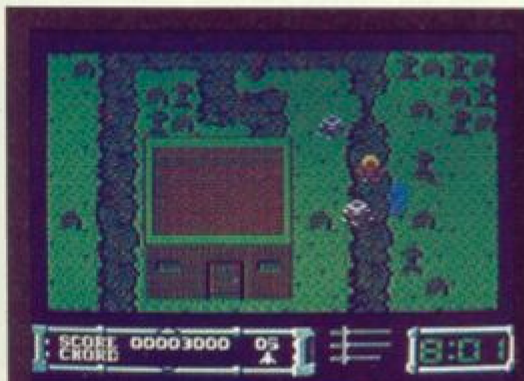
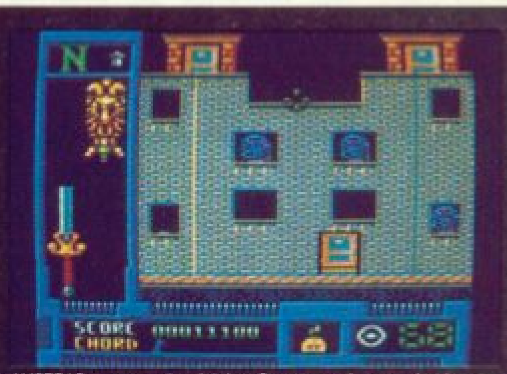
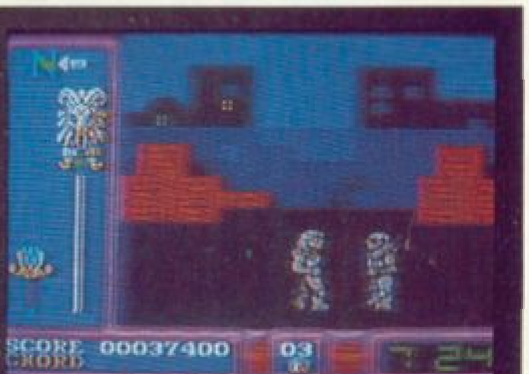


C64 – Robotron-style blasting in the cemetery, a part of the city with paths instead of roadways.



AMSTRAD – more colourful than Spectrum, of course, but just as slow. There's about as much gameplay in this scenario as there would be in magazine type-in.



SPECTRUM – Punch, kick, and dodge here. No tactics, no excitement – just keep hitting the buttons and waggling the stick.

Spectrum Version

Worst of the lot. Some of the screens on this would have looked dismal in 1984. In 1988 it's simply unforgivable.

GRAPHICS	2	IQ FACTOR	2
AUDIO	1	FUN FACTOR	1

ACE RATING 369

C64 Version

The best of the lot, with faster action, decent intro music, and better graphics. You can even get an on-screen map by pressing the space-bar. Even with all these improvements, however, it's still not worth getting.

GRAPHICS	4	IQ FACTOR	2
AUDIO	5	FUN FACTOR	2

ACE RATING 439

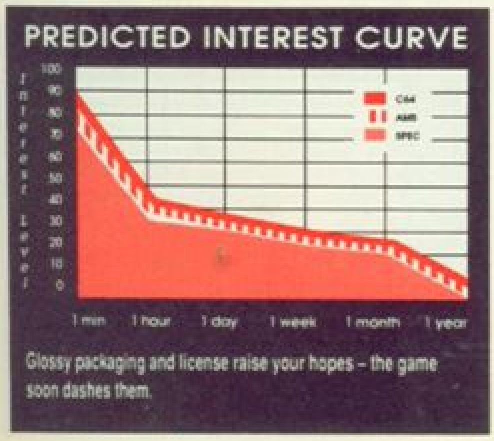
Amstrad Version

Slow gameplay, reasonably colourful, poor sound. Nothing here to compensate for the weak design of the game and the lack of addictive quality.

GRAPHICS	3	IQ FACTOR	2
AUDIO	2	FUN FACTOR	2

ACE RATING 394

PREDICTED INTEREST CURVE



Glossy packaging and license raise your hopes – the game soon dashes them.

Why oh Why??

Gremlin are obvously cagey about passing comment on a game that, reading between the lines, they are unhappy with. Richard Barclay, speaking for the company, said 'We could have put more money into the project, but then we couldn't have recouped our costs. If you spend ten times as much money on a game, you don't sell ten times as many.'

If this is the case, then Gremlin's overheads need to come down. Perhaps the message is that the market just isn't big enough to support the degree of hype, overhead, licence fee and programming costs that the larger companies are committed to. Time for a reappearance of the Jeff Minter style of attic-programmer, perhaps? Certainly it's a possibility as far as the shrinking 8-bit market is concerned.

Speaking for the programmers, Greg Holmes of Gremlin was refreshingly honest about the game. 'We didn't necessarily want to do the product,' he said, 'we were told to aim for the younger market... And after all, there isn't really a lot in the film either, is there? We're not 100% happy with it, but for the kids we think it's good.'

Kids? What kids?

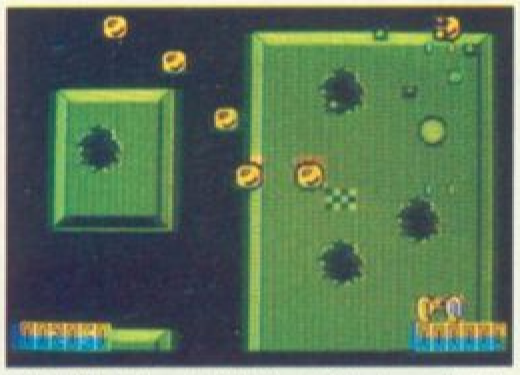
BEDLAM

GO! Create some havoc

PINBALL games are not the sort of thing you expect to find in the middle of vertically scrolling shoot-em-ups. *Bedlam*, however, is one such vertical scroller, and the four pinball games incorporated are designed to increase the players' score during the main game. This consists of taking charge of a spaceship (viewed from above) and attempting to complete the 26 levels of the game – which is, apparently, really a fighter simulation cooked up by the heads of the Stellar Imperium Pilots Academy, where you are a cadet. The various levels involve attack from both ground-based installations and waves of airborne aliens, and contact with any of these results in the player losing one of his initial five lives.

Extra fire-power is available to the player who manages to pick up any of the *fire-power* symbols that appear on the ground at set places throughout the game. The programmers have been very considerate, and included an option that allows the player to take up the game again from the point he reached last time. That said, *Bedlam* adds nothing new to the shoot-em-up theme. You'll have to be very determined to fight your way through to the end – and it doesn't take long once you've learnt the wave formations.

● Andy Smith



SPECTRUM – That's you in the bottom right-hand corner. Near the top is the entrance to the first of the pinball tables.

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Amstrad Version

Gameplay is a lot tougher, as your ship moves around a lot more slowly. It's more colourful than the Spectrum version, but that's only to be expected. No pinball tables available on the Amstrad version, making it a very average – and missable – shoot-em-up.

GRAPHICS 8 IQ FACTOR 2
AUDIO 6 FUN FACTOR 7

ACE RATING 678

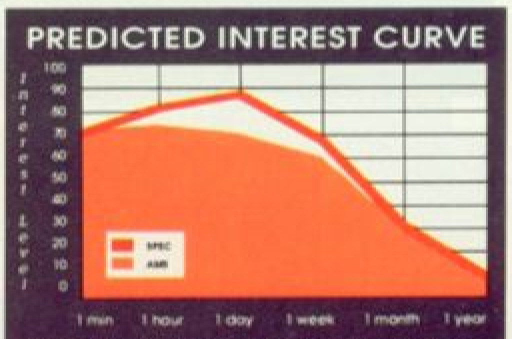
Spectrum Version

Great use of colour makes this a very good-looking game. The scrolling is adequate and the animation is fine. Gameplay is good if you're playing solo, but it tends to be a little tricky in two-player mode. If you're a real fan of this sort of game then check it out, though even shoot-em-up diehards could find the interest waning early.

GRAPHICS 8 IQ FACTOR 2
AUDIO 5 FUN FACTOR 7

ACE RATING 739

PREDICTED INTEREST CURVE



Absorbing fun for a while on the Spectrum, but not so on the Amstrad. Even on the Spectrum the fall-off's rapid though.

ROLLING THUNDER

Shoot some hoods with US GOLD

GELDRA'S the main villain in this conversion of the Namco coin-op. It's up to agent Albatross (you) to penetrate the ten levels of Geldra's secret "base and confront him. *Rolling Thunder* is a platform shoot-em-up viewed side-on, with swarms of Gelda's guards instructed to punch, shoot or blow you up on sight. Thankfully you're armed with a pistol and a machine-gun, and you can collect ammunition for both through marked doors – from which the guards also appear – situated at ground level and on balconies. Jumping up and down in pretty simple though. The arcade version's guards had coloured hoods to indicate the number of shots required to kill them, but there's no such indication on the home micro version – you have to assume each guard will need the maximum.

The coin-op has been faithfully converted and the programming team have done a remarkable job considering 8-bit limitations. It's fun to play and quite addictive in the short-term, but as with most coin-op conversions, the challenge will fade quickly.

● Andy Smith

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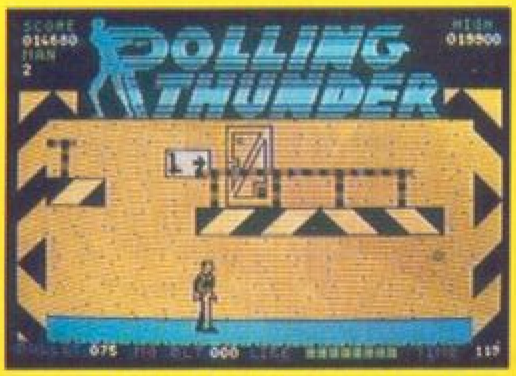
ATARI ST	£19.99dk	IMMINENT
AMIGA	£24.99dk	IMMINENT



SPECTRUM – The start of level two. There's some ammo behind that door on the balcony.

Spectrum Version

The screen's well-coloured and the absence of colour on the characters ensures there's no attribute clash. Sound unfortunately is diabolical. Gameplay is slightly slow and a little tricky to master.

GRAPHICS 7 IQ FACTOR 2
AUDIO 1 FUN FACTOR 8

ACE RATING 715

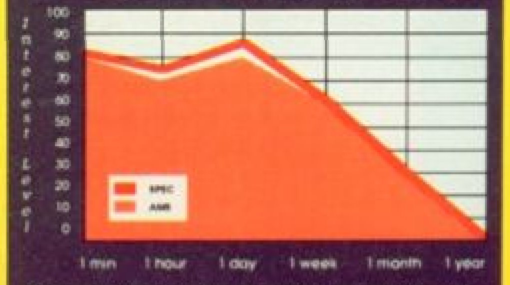
Amstrad Version

The graphics are colourful but have a chunky look about them. Gameplay is slower than on the Spectrum, making the game slightly less enjoyable to play (frequent death problems). Generally very similar to the Spectrum version but not quite as playable.

GRAPHICS 8 IQ FACTOR 2
AUDIO 2 FUN FACTOR 7

ACE RATING 690

PREDICTED INTEREST CURVE



Short-lived excitement. Doubtful whether you will bother loading this up in a year's time.

COLOSSUS MAH-JONG

Will CDS make the chow?

ACE
937
RATED

KONGS and pungs are the order of the day here – and if they sound like old arcade games to you, prepare to be enlightened: along with chows and pairs, they're the basic sets you can form in this rummy-like oriental game of strategy and chance. Not sets of cards, as you might assume from the comparison, but sets of tiles – small oblongs of ivory or plastic with symbols on them, the distinction being a bit academic in this case since they're confined to your computer screen.

The tiles fall into five groups: suit tiles, winds, dragons, flowers and seasons. The first three groups are far and away the most important of these, flower and season tiles being bonuses and not essential to the gameplay.

The game has three suits – bamboo, character and circle – the tiles within them being numbered from one to nine. There are four different kinds of wind tile – North, South, East and West – while dragons come in red, white and green varieties. If you're a whizz at mental arithmetic you'll probably make that 34 tiles between the three groups, but the actual total is four times that number.

Quite simply, the three main groups have four of everything: four red dragons, four East winds, four 'seven circles', four 'two bamboos' and so on. The heart of mah-jong gameplay is all about collecting sets of these duplicates – either three identical tiles (a *pung*) or all four (a *kong*). Though you'll also need to form the self-explanatory *pairs*, it's pungs and kongs that get you the big points, while *chows* – sets of three consecutive tiles from the same suit – score you nothing whatsoever.

RELEASE BOX		
C64/128	£9.99cs, £14.99dk	OUT NOW
AMSTRAD	£9.99cs, £14.99dk	OUT NOW
PC, ST and **AMIGA** versions later this year		

If mah-jong's all about points (and it certainly is) you might wonder why anyone would want to form chows at all. The answer lies in the structure of the game. At the start of a hand, each of the four players is dealt thirteen tiles, and must then try and get rid of them before the other three by forming sets. If these are kongs or pungs then so much the better, but there are big points advantages if you *go mah-jong* – get rid of all your tiles, that is – so it can be worth making chows rather than hanging on and being beaten to it. Considerations like these make decisions in mah-jong – notably over which tile to discard – quite complex things. The strategies involved seem odd at first, but they can be picked up very quickly and make for intriguing (if not exactly mind-stretching) gameplay.

That's mah-jong the game: what's the computer version got extra? Well, there are three useful opponents for starters, adjustable in strength between complete push-overs and real tough cookies. The package also includes a tutor program which, along with the brief-ish manual and a little bit of concentration, provides a great introduction to the game.

Graphically polished and generally easy to use with some shrewd micro opposition, this makes a worthy addition to the Colossus range and a great piece of entertainment software in its own right.

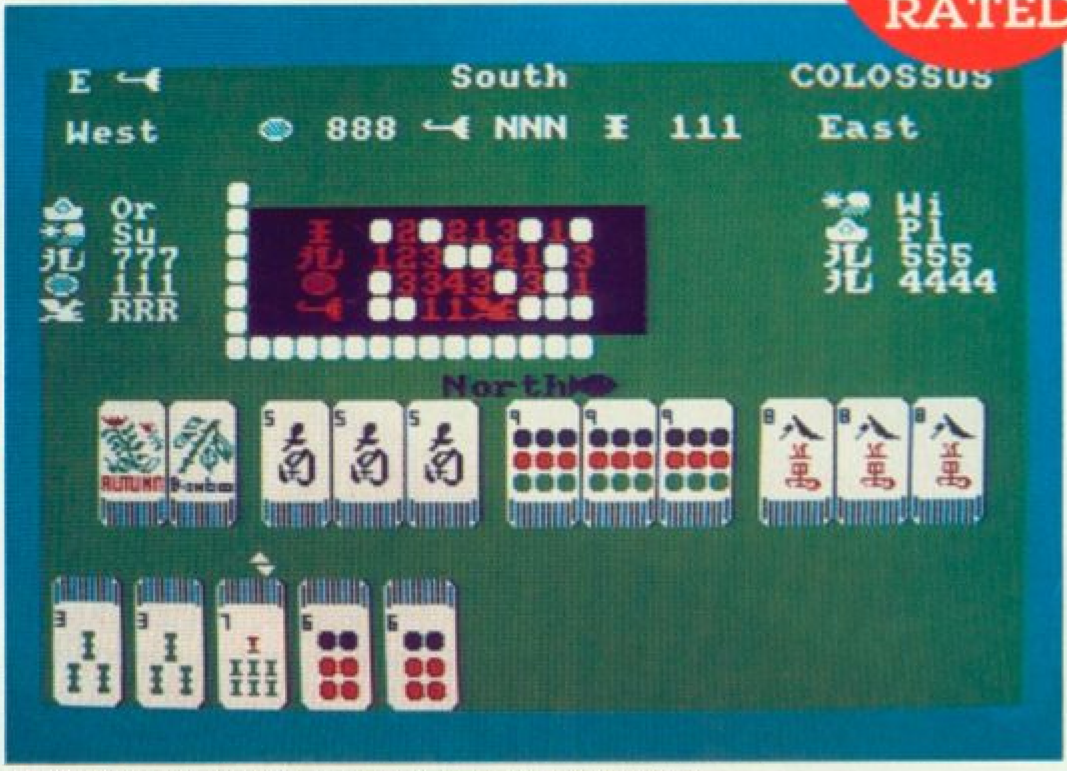
● Andy Wilton

Amstrad & C64 Versions

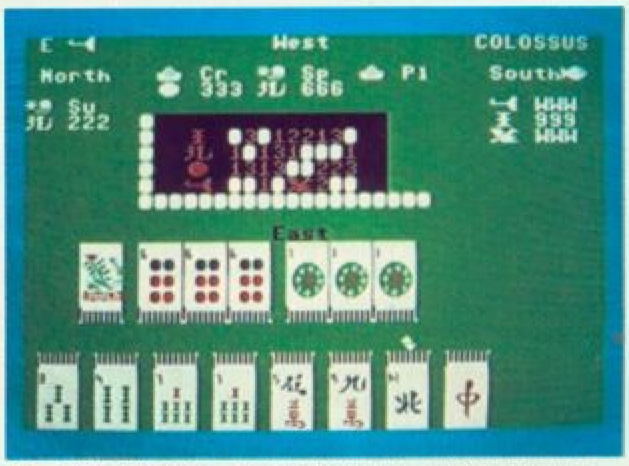
These versions are identical in their mechanics – the original program was written in the high-level language Forth and 'ported' to each machine. There's nothing to set them apart on the graphics or sound fronts, but the C64 game runs rather slower.

GRAPHICS	6	IQ FACTOR	8
AUDIO	N/A	FUN FACTOR	4

ACE RATING 937

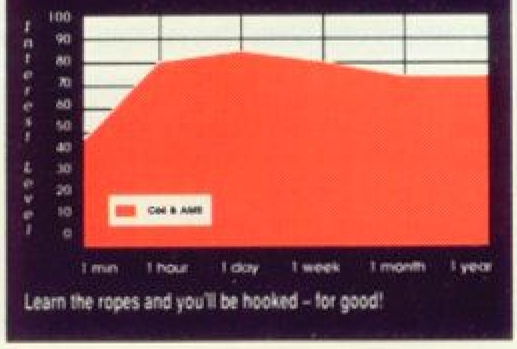


AMSTRAD – You're 'fishing': turn either of those pairs into a pung and you can go mah-jong!



C64 – You've got two pungs – one circle and six circle – and that pair of seven bamboo gives you the makings of another. Time's short though: that 'fish' symbol means that South (the player to your right) only needs one more tile to go mah-jong.

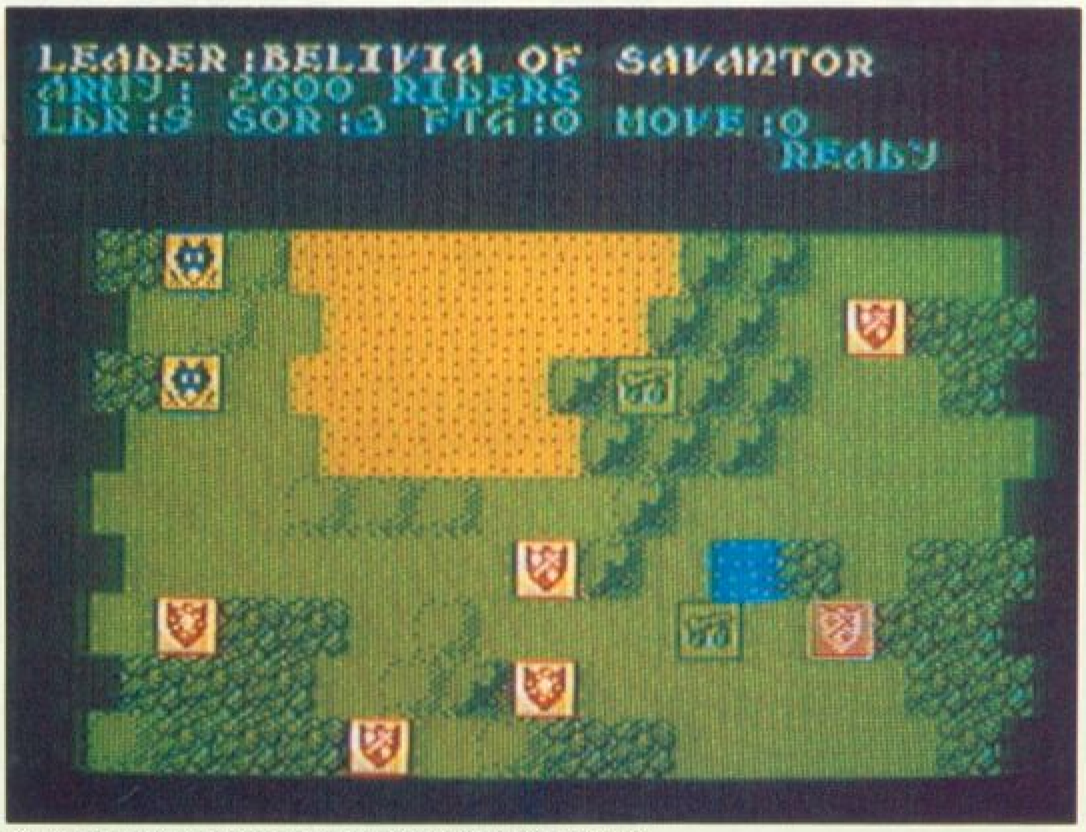
PREDICTED INTEREST CURVE



Learn the ropes and you'll be hooked – for good!

SORCERER LORD

PSSst – wanna play a wargame?



LEADER :BELIVIA OF SAVANTOR
ARMY : 2600 RIDERS
LDR :9 SOR :3 FTG :0 MOVE :0
READY

SPECTRUM – well into the game and most of your forces are committed to the struggle.

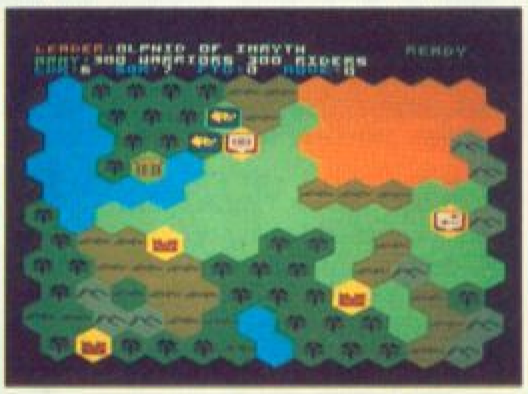
TOUGH times are ahead in the once-peaceful lands of Galanor. That old rogue the Shadowlord is, even as you read this, marching forth from his citadel with a hideous army that is hell-bent on capturing the citadel of Yarthros, and thereby ruling the land.

Unless of course you can stop him. This solo fantasy wargame puts the player in charge of the three remaining race types that inhabit the lands of Galanor. At the start of the game only a small number of characters know of the Shadowlord's invasion, and the player controls these few characters and attempts to rouse the rest of the forces within the land.

Recruiting armies to your noble and worthy cause is not difficult – a unit merely has to land on the fortress or citadel where an army is located, and the army is allied to your cause.

No fantasy wargame would be complete without the addition of a little magic to spice it up, and *Sorcerer Lord* has its fair share, which can have the player winning or losing a vital battle. The strength of magic that the player is able to summon (though when it's used is decided by the computer) is determined by the number of Rune Rings (physical terrain features looking like Stonehenge) that the player controls. At the start of the game the player has control of all eight Rune Rings, but as the play progresses, the Shadowlord is swift to take possession of them.

RELEASE BOX		
SPEC	£12.95cs	OUT NOW
AMSTRAD	£12.95cs, £17.95dk	OUT NOW
C64/128	£12.95cs, £17.95dk	IMMINENT



AMSTRAD – hexagons replace squares. You've got few forces to manage at the start of the game.

Apart from the tactical map, which can be scrolled in any direction, a strategic map can be called up at the touch of a button. This map shows the whole of the lands of Galanor, together with terrain features and the approximate positions of the units. Terrain plays an important part in the game, as each unit has a set number of movement points at the start of each turn, and the various types of terrain affect the various units to different extents.

Sorcerer Lord is certainly no pushover. A player will lose either if the citadel at Yarthros is captured, or if the Shadowlord captures any fortress and holds it for twelve consecutive turns. An absorbing and atmospheric game that will keep you playing for a long time to come

● Andy Smith

Amstrad Version

The most striking thing about the Amstrad version is the hexagonal display of the playing area. The colours, though, are garish and dull, and the unit symbols are not as detailed as with the Spectrum version. Just as difficult and just as absorbing on the Amstrad as it is on the Spectrum.

GRAPHICS	7	IQ FACTOR	8
AUDIO	3	FUN FACTOR	8

ACE RATING 838

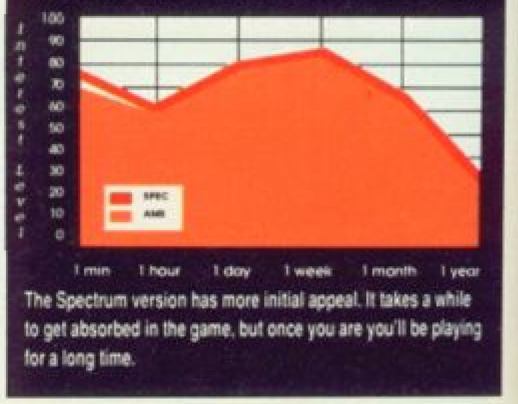
Spectrum Version

The screen display is colourful and well designed, though the information screen does not remain visible for long enough to absorb all the statistics at one go. The screen is divided into squares, not hexagons, but this doesn't affect the overall playability of the game. For those that enjoy PSS's arcade sequences, well I'm afraid you don't get one this time.

GRAPHICS	8	IQ FACTOR	8
AUDIO	N/A	FUN FACTOR	8

ACE RATING 844

PREDICTED INTEREST CURVE



The Spectrum version has more initial appeal. It takes a while to get absorbed in the game, but once you are you'll be playing for a long time.

GUADALCANAL

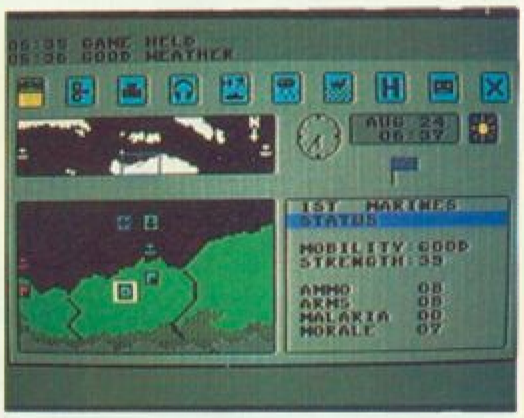
ACTIVISION head back in time

KAMIKAZE pilots may have played their part during the Japanese and American struggle for control of the Pacific during World War II, but you won't find any of them in Activision's latest wargame, set on and around the island of Guadalcanal – regarded by many as the key to America's first Pacific offensive. If the Americans couldn't take and keep Guadalcanal, then their plans for naval supremacy in the Pacific were 'all washed up'.

RELEASE BOX

C64/128	£9.99cs, £14.99dk	OUT NOW
AMSTRAD	£9.99cs	IMMINENT
SPEC	£9.99cs	IMMINENT

This solo wargame gives the player the chance to recreate the battles, with the player deciding to play either the Japanese or American forces. If you're at all familiar with the original campaign then you'll realise that attrition played a major part. It's only fitting then that a major portion of the game is given over to getting supplies to whichever army you happen to be controlling. Troops can't march on empty stomachs and they can't attack the enemy without ammunition.



The strategic map can be seen in the top portion of the screen, while you can use the more detailed tactical map in the centre for all those important decisions.

The three scenarios in the game include a short three-day battle which is designed to introduce the player to the game. The other two scenarios are the full campaign, with the player controlling either the American or Japanese forces.

It's fun to play and would serve as a great introduction to the genre for budding wargamers, though the seasoned strategist could find the game's limitations a little severe.

● Andy Smith

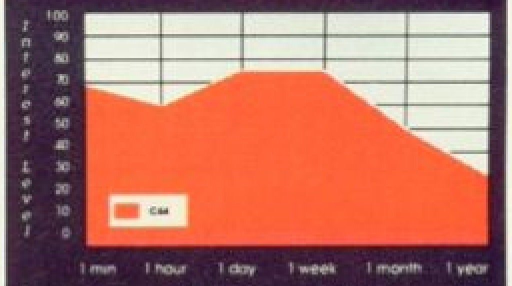
C64 Version

The screen is well-designed and colourful, and sound is well-used. The supply side of things has been well implemented, making this an enjoyable game to play while still providing enough of a challenge to keep the player busy for quite some time.

GRAPHICS	7	IQ FACTOR	8
AUDIO	6	FUN FACTOR	8

ACE RATING 764

PREDICTED INTEREST CURVE



An absorbing game initially, but seasoned strategists may find it has too many limitations to keep them interested for any great length of time.

APOLLO 18

Space out with ELECTRONIC ARTS

OVER the moon is where you could find yourself in this curious not-quite-a-flight sim based on the American space program. It takes you through seven distinct stages of a lunar mission, ending – if you're successful – with your triumphant splash-down in the Pacific.

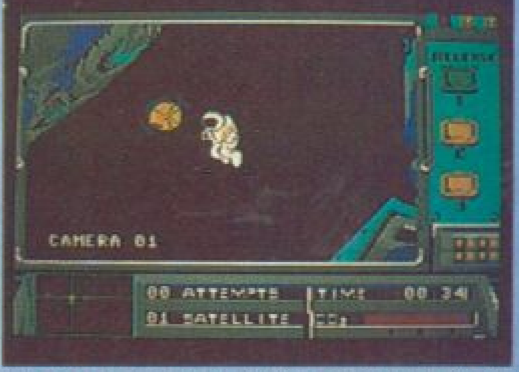
RELEASE BOX

C64/128	£9.95cs, £14.95dk	OUT NOW
No other versions planned		

It's a strange game, because although it looks as though it should be some kind of simulation, it plays more like an old-fashioned reaction tester. The chances are that after a couple of hours you'll have successfully completed all the various tasks, leaving you simply with the aim of getting further up the high-score table.

In the first part – blast off – the only skill needed is to hit your fire button as near to zero as possible as a meter races very rapidly from -999 to +999. You have to do this several times before making it into orbit, and you are only allowed a tolerance of 148. The first few goes it seems fiendishly difficult, but after a few minutes it becomes not just easy, but boring.

Successful entry into orbit gives you the chance to perform other tasks: docking and undocking the Command Module with the Lunar Module; correcting course; landing and then walking on the moon; space walk; splash-down. All of these are controlled in a pretty simple way and are none too demanding to accomplish.



Going for a nice little space walk; you've got to hook on to the satellite, using the three lines to calculate your position.

Overall, this Apollo 18 mission must be counted a disappointing failure; it fails to challenge, fails to simulate anything worthwhile and, worst of all, fails to entertain.

● Pete Connor

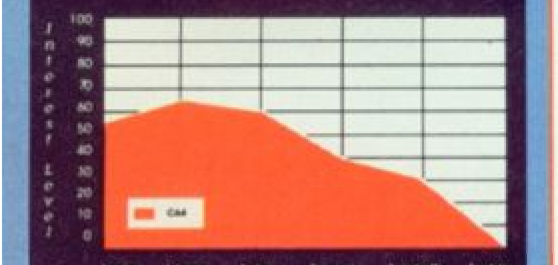
C64 Version

Graphics are pretty enough and the sound is adequate, but the gameplay leaves an awful lot to be desired. A bit of a damp squib rather than a blazing rocket.

GRAPHICS	8	IQ FACTOR	3
AUDIO	6	FUN FACTOR	5

ACE RATING 549

PREDICTED INTEREST CURVE



Fails to blast off with sufficient power to achieve orbit.

ANDY CAPP

Newspaper capers from MIRRORSOFT

HEROES come in all shapes and sizes and just to prove it, hot from The Daily Mirror where he stars in his own comic strip, comes Andy Capp. He's the laziest, most conniving skiver north of the Humber, and the transition from print to pixels hasn't changed him one bit.

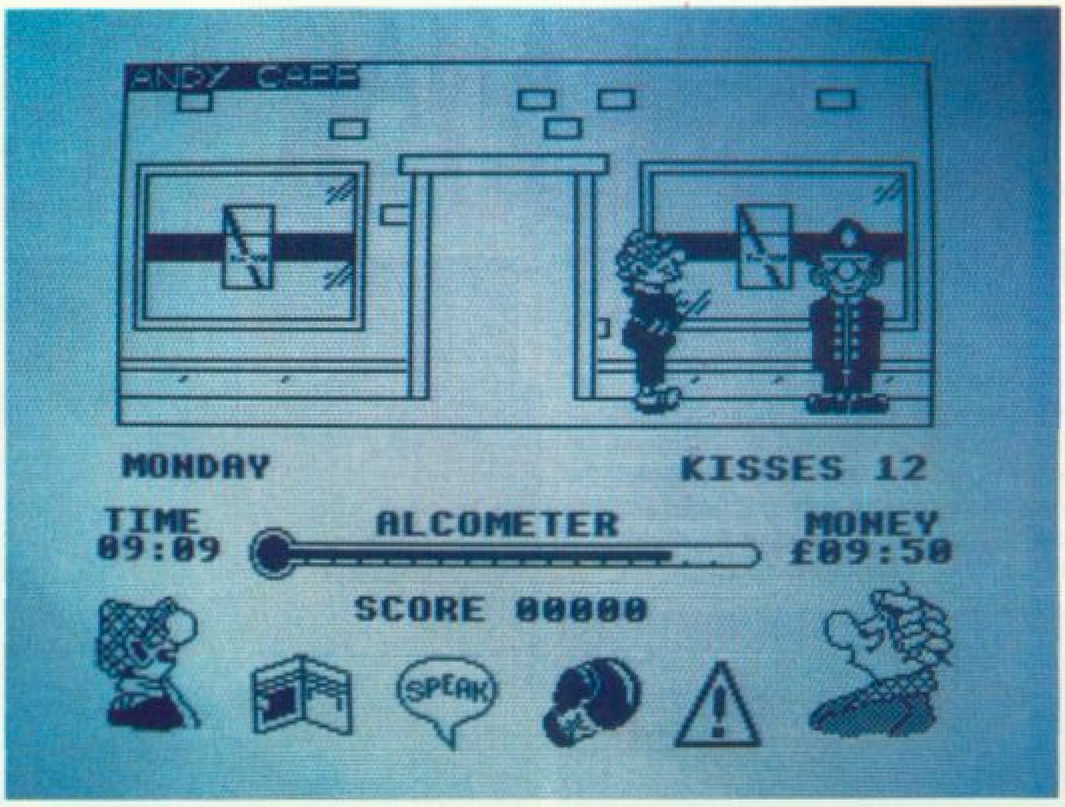
Andy's debut on the micro has him in an arcade adventure viewed side-on, where he attempts to recover his stolen Giro. You've only got a week to guide Andy around on his icon-driven adventures before Flo's gonna hop it back t' mother's. So time is of the essence, and with very limited funds it's not going to be easy – especially since you still owe money to the rent man, and he won't be put off for much longer.

Andy's limited funds at the start of the game simply aren't enough to keep his 'alcometer' topped up for the week, and should he dry out – well, it's game over. The game's full of puzzles like trying to find out how to beg, borrow or steal some extra dosh, and how to get rid of the rent man who bars your entrance to the pub.

The gameplay is tough to begin with because it's hard to find your way around. Nice touches added to the game, like the changing background colour to signify the time of day (though a twenty-four hour digital clock is always on-screen) add atmosphere, making the game fun to play, at least until the novelty wears off.

The adventuring side of things is somewhat limited and *Tai Pan* springs immediately to mind as a comparison. Avid followers of the comic strip will easily identify all of Andy's traits, but dedicated arcade adventurers may find the game too simplistic and too easy to complete to keep them interested for any length of time.

● Andy Smith



AMSTRAD – It's no wonder the Policeman's looking stunned, our hero's just blown him a kiss.

Amstrad Version

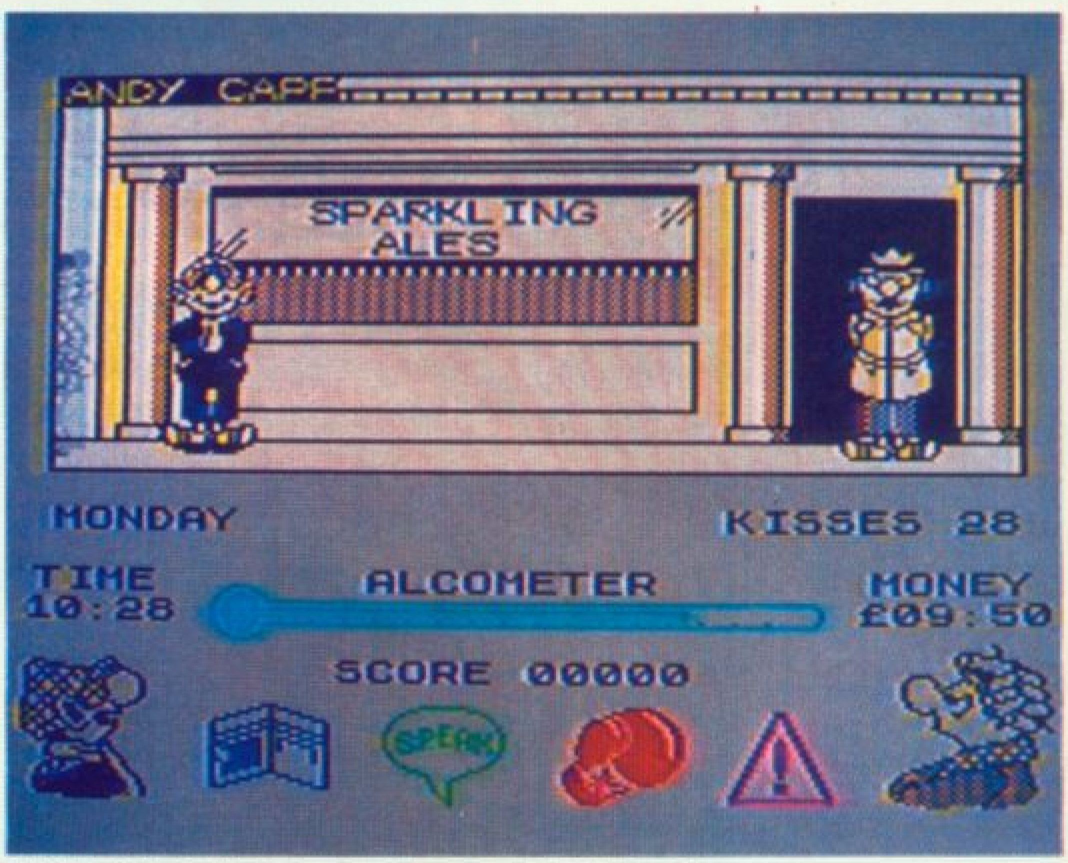
Almost identical to the Spectrum version. Gameplay and objectives are the same. Sound is the same as for the Spectrum version, but the effects are of a slightly higher quality.

GRAPHICS	6	IQ FACTOR	4
AUDIO	6	FUN FACTOR	7

ACE RATING 641

RELEASE BOX

SPEC	£9.95cs	OUT NOW
C64/128	£9.95cs, £12.95dk	IMMINENT
AMSTRAD	£9.95cs, £14.95dk	OUT NOW
ATARI ST	£19.95dk	MAR/APRIL
AMIGA	£19.95dk	MAR/APRIL



SPECTRUM – Just how is Andy going to sneak past the rent man and get into the ale house?

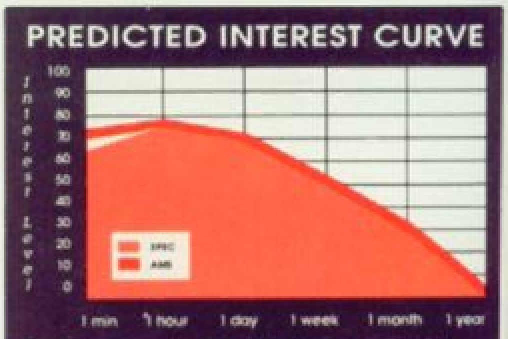
Spectrum Version

Though it's mostly monochrome it's very atmospheric. Sound is limited to a title tune and Andy's footsteps (which tend to irritate after a while), but that doesn't detract from the gameplay, which is easy to pick up. A fun game to play that unfortunately doesn't have sufficent in it to hold your interest for any great length of time.

GRAPHICS	7	IQ FACTOR	4
AUDIO	6	FUN FACTOR	7

ACE RATING 635

PREDICTED INTEREST CURVE



Playable and atmospheric, but it just hasn't got anything like enough of a challenge in it to keep you playing for long.

GARFIELD

Cartoon cat capers from THE EDGE

RELEASE BOX

C64/128	£9.99cs, £14.99dk	OUT NOW
SPEC	£8.99cs	IMMINENT

GIRLFRIENDS come and girlfriends go, but feline mega-star Garfield isn't going to lose his without a struggle. The lovely Arlene has been spirited off to the local pound and poor Garfield has to get her back.

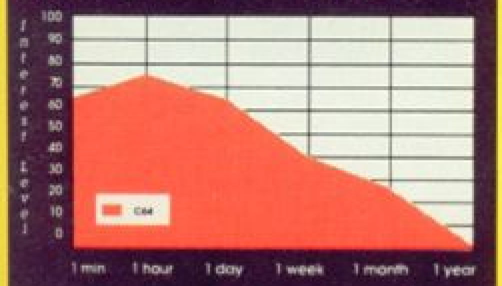
C64 Version

Chunky and colourful graphics give the game the right kind of cartoony atmosphere, and there's a bouncy soundtrack to accompany the action. Whether you find the action intriguing or not is another matter.

GRAPHICS	7	IQ FACTOR	6
AUDIO	7	FUN FACTOR	5

ACE RATING 585

PREDICTED INTEREST CURVE



Not as easy to get into as it could be, or as demanding in the long-term as it *should* be.

As the numerous fans of the cartoon strip will know, Garfield has two main problems in his life; he can't get enough sleep or enough food. His ideal life would be one long kip, punctuated by very large meals. So in this arcade adventure your job is not only to find Arlene, but to keep up both food and sleep levels.

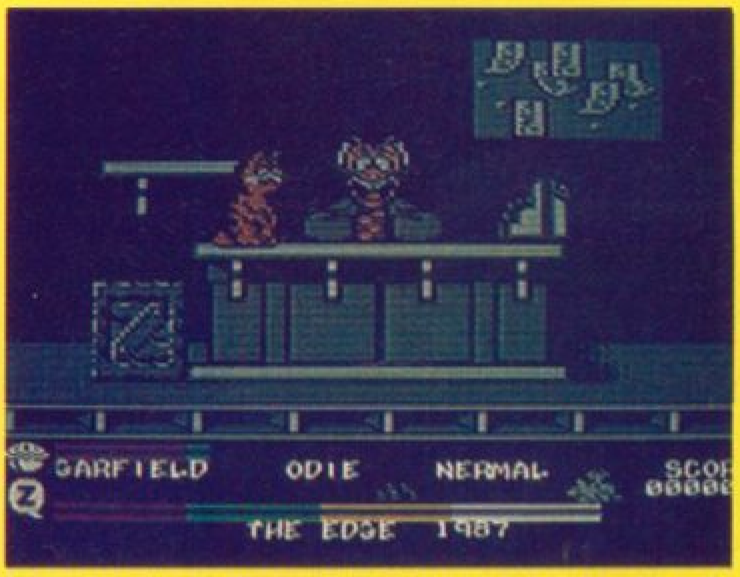
The game starts out in the house of Garfield's owner, Jon. Unfortunately for you, Jon has locked the fridge, so food is the first priority. The best you're likely to scoff early in the game is the aniseed balls belonging to Odie (the world's most stupid dog).

Throughout the game you can pick up and use various objects – lamps, buckets and the like. Should you be unable to find any food at all, Garfield will suffer a 'snack attack' and gobble whatever object he is carrying. If he's not carrying anything at all, it's the big sleep for him.

Both food and sleep meters run down pretty quickly, so you've got to get out and explore as soon as possible. There's a park, underground area, and shops. Curiously, the owners of the hardware store, butcher's and health food store seem to be identical triplets.

While *Garfield's* graphics are jolly and cartoonish, the game's arcade adventure format is very old-hat – wander around, pick up objects, try to use them intelligently, and don't let your food and sleep meters run down. While fans of the cartoon may go for the cute and pretty representation of their hero, others should try before they buy.

● Pete Connor



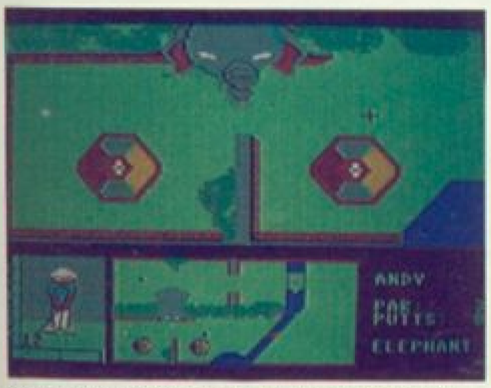
Garfield in the hardware shop. The owner's brother seems to keep the butcher's – and the health food store...

MINI PUTT

Crazy clubbing from ELECTRONIC ARTS

PUERILE though you may find the idea, in practice this computerised crazy golf actually provides a resonable dollop of fun.

Instead of all that serious business of selecting clubs and tipping the caddy, *Mini Putt* merely gives you one club – a putter, naturally – with which to thrash your way around four very crazy courses indeed.



Bunkers are one thing, but Elephants... What on earth would Jack Nicklaus say?

RELEASE BOX

C64/128	£9.95cs, £14.95dk	OUT NOW
No other versions planned		

Whichever one you select, the obstacles prove to be somewhat different to those you'll encounter at Gleneagles or Royal Birkdale – the Elephant Hole has you trying to putt past a protruding proboscis, and on others, windmills and even jet planes interrupt your stately progress. And, of course, there are all manner of rolling rough, bridges, water hazards and walls. Control is pretty simple – set one meter for strength, and then another for accuracy. What skill there is – and to be honest there isn't exactly a lot required of you – comes mainly in selecting the appropriate path through those wacky hazards.

While it's not the most demanding 'sports sim' you'll ever play, it certainly provides enough jollity to make it a welcome alternative to serious stuff like *Leaderboard* – and there's an option for up to four players to compete.

● Pete Connor

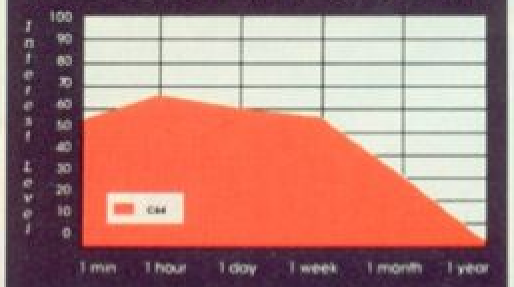
C64 Version

If possible, get the disk version; the tape multi-load can be very frustrating, reading not just the separate courses but each single solitary hole. Graphics are bright, if fairly simple, while the sound is merely average.

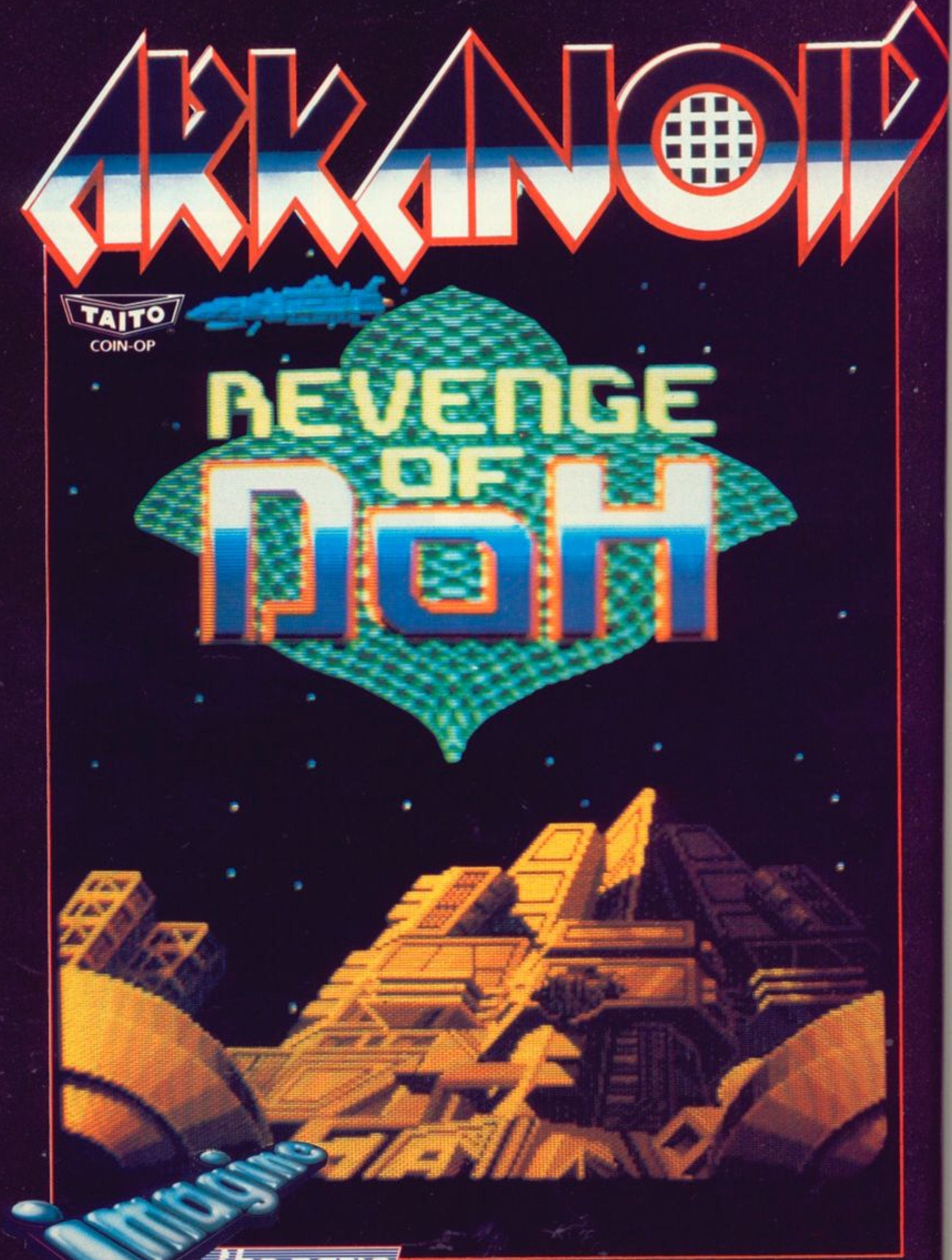
GRAPHICS	6	IQ FACTOR	4
AUDIO	5	FUN FACTOR	8

ACE RATING 586

PREDICTED INTEREST CURVE



A wacky world of fun – but not for long.


ARKANOID
TAITO
COIN-OP
REVENGE
OF
DOH
imagine
..the name
of the game

Licensed from Taito Corp., 1986

Multi screen,
realistic graphics and all the
coin-op features.

SPECTRUM £7.95 SPECTRUM

COMMODORE £8.95 AMSTRAD

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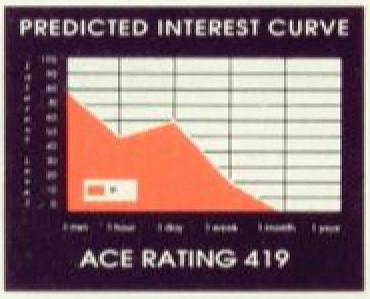
SCREAMING WINGS

RED RAT crash land

RELEASE BOX		
ATARI ST	£14.95dk	OUT NOW
	No other versions planned	


PREDICTED INTEREST CURVE

ACE RATING 419

UNPROFESSIONAL is the first word that screams into your head as soon as you start to play *Screaming Wings*. This vertically-scrolling shoot-em-up boasts some awful collision detection, terrible animation and indecipherable digitised speech. Simply fly your plane (viewed from above) through several stages under constant attack from other airborne craft. The game's tough only because the collision detection's so bad.

● Andy Smith

TOUR DE FORCE

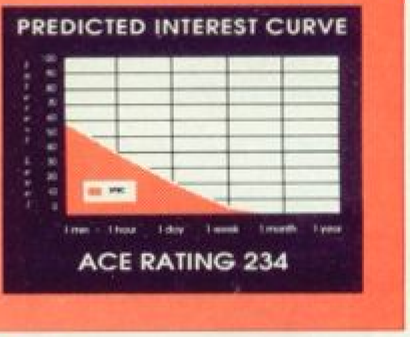
GREMLIN get on their bikes

JAPAN hosts the first of five legs in a bicycle obstacle race that takes the player to exotic countries. You simply have to win each race to proceed to the next, and if you don't succeed first time, well you can play that leg until you do.

RELEASE BOX		
SPEC	£7.99cs	OUT NOW
C64/128	£9.99cs, £14.99dk	IMMINENT
AMSTRAD	£9.99cs, £14.99dk	IMMINENT

This is a very poor game on the Spectrum – the scrolling is awful, as is the collision detection. The races are easy to win and you won't get more than a few hours play out of the game.

● Andy Smith


PREDICTED INTEREST CURVE

ACE RATING 234

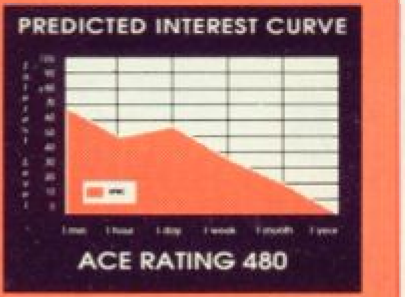
BASKET MASTER

Slam-dunking IMAGINE style

RELEASE BOX		
SPEC	£7.95cs	OUT NOW
C64/128	£8.95cs, £14.95dk	IMMINENT
AMSTRAD	£8.95cs, £14.95dk	IMMINENT

ONE on one is the order of the day for this basketball simulation. Play against either a friend or the computer and dribble, intercept, shoot or slam-dunk your way into the lead. Instant replay facility allows you to watch those glorious baskets in slow-mo. However, incredibly tough gameplay makes this a frustrating game to master and a tedious one to play. Strictly one for basketball fans.

● Andy Smith


PREDICTED INTEREST CURVE

ACE RATING 480

Spectrum Spectrum Spectrum
TIME
2:54
12345
000
CAMERON
12345
008
MAHOON

KICKSTART 2

MASTERTRONIC throttle up

01:74 00:00 00:00 00:00 00:00
TIME 01:74 TOTAL TIME 001:74
01:68 00:00 00:00 00:00 00:00
TIME 01:68 TOTAL TIME 001:68

ALL the thrills and spills of dirt bike racing? Well, not quite, but it's a playable game for a short while and the course-designer means you can at least experiment with the obstacles. The 24 preset courses will not take long to master and the computer opponent is a pushover. A simple, fun game, but don't expect much in the lasting interest stakes.

● Andy Smith

RELEASE BOX		
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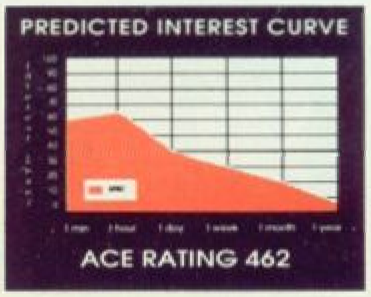
C64/128	£1.99cs.	OUT NOW
AMSTRAD	£1.99cs	OUT NOW


PREDICTED INTEREST CURVE

ACE RATING 462

Some very tasty updates are now available. Can ST owners afford to miss out on *Super Sprint*? Can Amstrad owners pass up *Bobsleigh*? Should Spectrum owners ignore *Rampage*?

Don't be caught out by a duff conversion though – first check the ACE updates section to see just how well the game plays on your particular micro.

ATARI ST

SUPER SPRINT

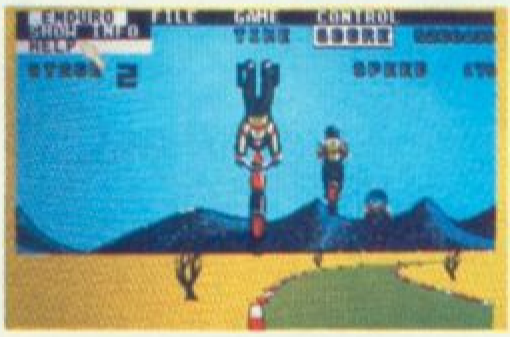
Electric Dreams £19.95dk
Spectrum version reviewed Issue 2 – ACE Rating 907
C64 version reviewed Issue 3 – ACE Rating 917
Amstrad version reviewed Issue 4 – ACE Rating 831

The transition from arcade machine to ST has been highly successful. The graphics, sound and sheer playability are superb. With up to three players and a drone, the action is fast and furious. Add its great addictiveness, and the game retains its high rating.

● ACE RATING 917

ENDURO RACER

Activision £19.99dk



This motocross arcade game made the transition to 8-bit micros some while ago, and the ST version is now available. The graphics have been improved and the result is a good, fast, addictive arcade conversion. The bike's revving noises have been replaced by music, though, which may disappoint some.

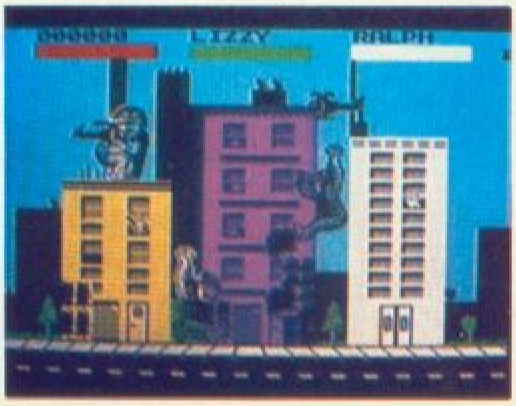
● ACE RATING 815

SPECTRUM

RAMPAGE

Activision £9.99cs
C64 version reviewed Issue 5 – ACE Rating 887

The monster mash makes it to the Spectrum, and was well worth waiting for. The monsters are all monochrome and it can be a little difficult to tell who's who at times. Still a great game to play, and Spectrum arcade conversion fans will not be disappointed.



● ACE RATING 880

GRYZOR

Ocean £7.95cs, £12.95dk
Amstrad version reviewed Issue 5 – ACE Rating 771

The game's multi-load on the Speccy, but at least you can work at each level until you've completed it. No shields to pick up either – just shoot the gun emplacements and you've got the extras. The Amstrad 'explosion' as you die is very convincing and resembles a true arcade effect – on the Spectrum, though, it looks like a soap bubble. Still, it's an enjoyable game that should keep you going for a while.

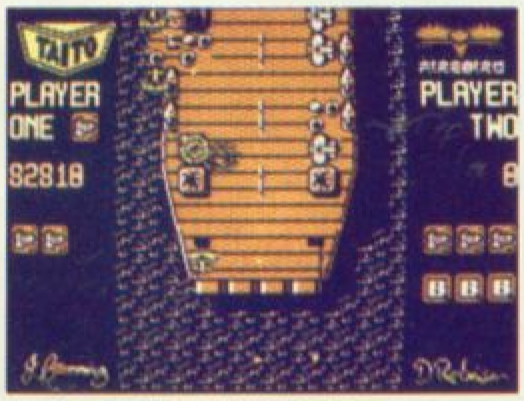
● ACE RATING 750

C64/128

FLYING SHARK

Firebird 8.95cs, £12.95dk
Spectrum version reviewed Issue 5 – ACE Rating 893

If you've played the arcade or Spectrum versions of this game, then the C64 version may disappoint. The gameplay has suffered through being speeded up dramatically. This only detracts from the game, and your interest will die that much sooner.



● ACE RATING 735

TEST DRIVE

Accolade £9.95cs, £14.95dk
Amiga version reviewed Issue 5 – ACE Rating 826

The gameplay is surprisingly similar to the Amiga version. Graphics are chunky but well-animated to give a good car driving game. Still short of lasting interest though.

● ACE RATING 815

AMIGA

FEUD

Mastertronic £9.99dk

Amiga budget titles don't come much better than this. A wonderful arcade adventure in which the player takes charge of one of a pair of feuding wizards, and has to run around finding the ingredients for spells to cast on the other. A real treat at the price.

● ACE RATING 860

AMSTRAD

BOBSLEIGH

Digital Integration £9.95cs, £14.95dk
Spectrum version reviewed Issue 4 – ACE Rating 901
C64 version reviewed Issue 4 – ACE Rating 567

Thankfully the Amstrad version followed the Spectrum version more than it did the C64. A thoroughly playable bobsleigh simulation to keep you enthralled for a long while.

● ACE RATING 901

ROOTIN' TOOTIN' CONSTANT LOOTIN' ALWAYS SHOOTIN' SHOWDOWN!
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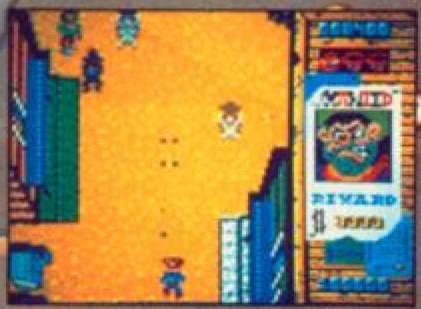
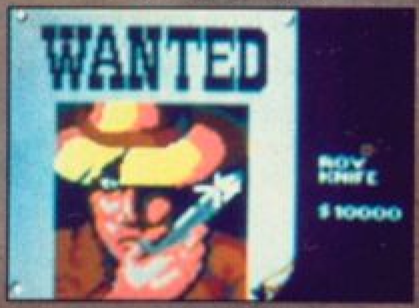

WANTED
REWARD

Screen shot from Amstrad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Screen shot from CBM 64/128

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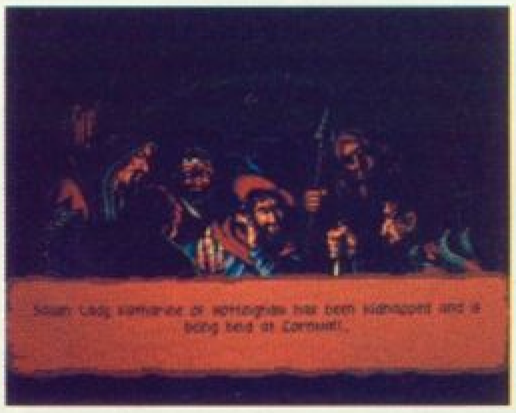
ATARI ST
DEFENDER OF THE CROWN

Mirrorsoft £29.95dk



Norman rogues are always ready to sabotage Saxon plans.

Wolfric the Wild and his Saxon pals got the Amiga *Defender of the Crown* a lot of coverage when it hit the UK market last year, and small wonder. With all those epic sequences – swashbuckling by firelight, catapulting enemy castles, riding off to the joust and the like – this epic tale of brave Saxons freeing England from Norman invaders could hardly fail to turn heads.

Sadly, appearances deceived, and the game turned out to be something of a disappointment. Behind those fancy sequences the actual gameplay was puny and unsatisfying. Most people completed the thing within days, while hardened gamesters conquered Merrie England the first time they played.

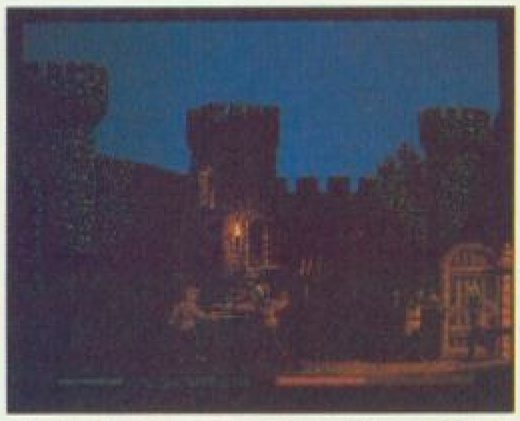
Fortunately for all you ST owners out there, *Defender of the Crown* creators Cinemaware have vastly improved things during conversion. The aim's still pretty much the same – conquer territories, build an army with the revenue this brings in and then march on the Norman strongholds of the South. However, extra options and limitations new to the ST version turn the strategy of this into quite a tricky logistical exercise. A clever garrison system gives you some interesting decisions on manning, while a delightful espionage option gives you a peek at your opponents' forces and financial well-being (for a fee). Get really stuck and you can visit Sherwood Forest to seek assistance from Robin Hood – but he'll only help you three times, so as with your other resources you'll have to use the Sherwood option judiciously.

Atari ST Version

Graphics create a wonderful Hollywood-mediaeval atmosphere, with siege and map screens being particularly impressive.

GRAPHICS	9	IQ FACTOR	6
AUDIO	7	FUN FACTOR	6

ACE RATING 826



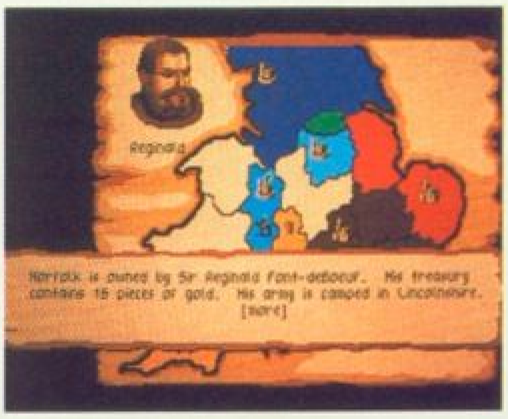
Raiding in Cornwall, you're fighting Edmund the Grim's retainers for a crack at his coffers.

Add to these strategic problems the tactical interest of individual battles, and things really hot up. Where the Amiga version offered a simple choice between *attack, strong attack* and *retreat*, the ST game is quite a bit more complex. With half a dozen options open to you – you can charge with your knights or bombard with your catapults, outflank the enemy or just stand and fight him – you've got a fair amount to think about.

The arcade side of things has been nicely fleshed out too, with catapulting and raiding both posing some tough timing and co-ordination problems. A successful raid can gain you money or land while good siege technique is vital, so the increased difficulty here makes a big difference. The jousting's still, you should pardon the pun, pretty hit-and-miss, but in the tough game *Defender of the Crown* has become on the ST it can be a lifesaver as a last-ditch way of gaining land.

Other nice touches help things along, but with good strategic gameplay married to the dazzling presentation of the original this version could hardly fail to impress and entertain anyway.

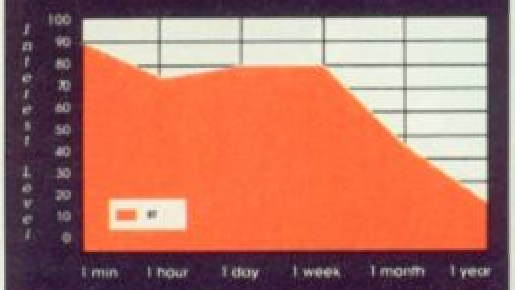
● Andy Wilton



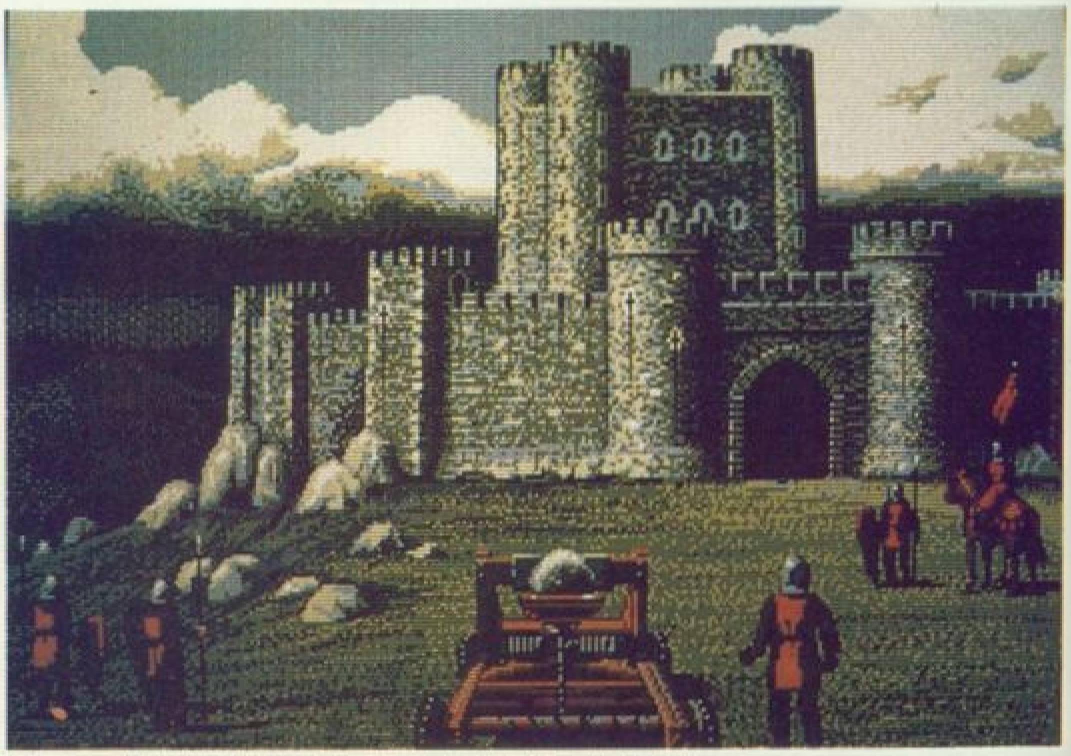
Norfolk is owned by Sir Reginald Front-deBoeuf. His treasury contains 15 pieces of gold. His army is camped in Lincolnshire.
[more]

Spying on a Norman rival is expensive, but the information can make all the difference.

PREDICTED INTEREST CURVE



Frustrating early on, but very absorbing once you get into the swing of things.



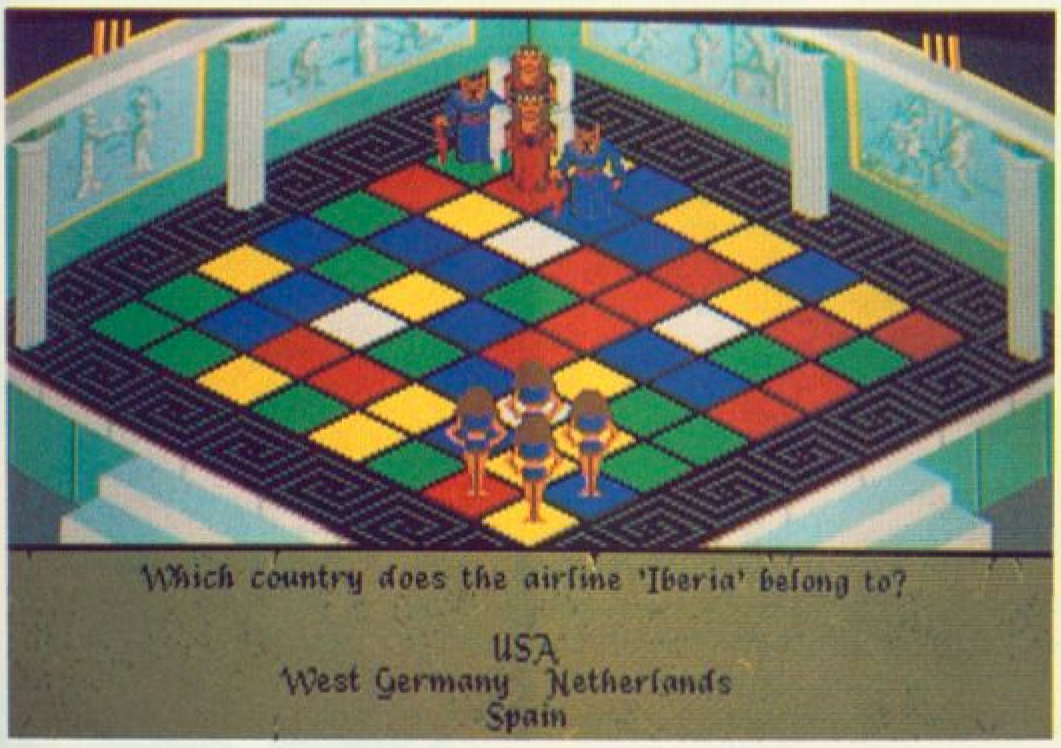
Laying siege to Nottingham Castle: breach the wall and you've still got the garrison to defeat.

ATARI ST & AMIGA
POWERPLAY

ACE 955 RATED

Arcana £19.95dk

Ancient Greece was a troubled sort of place it would seem. Warring gods vied for power, their armies of satyrs and minotaurs struggling to answer really difficult questions like 'What's the tallest cathedral in Britain?' or 'Which role did Larry Hagman play in Dallas?'. Well that's what Arcana reckon anyway, and these 16-bit versions of their clas-sic(al) quiz and strategy computer board game might well convince you too. A lot of work's gone into them over and above the conversion task itself, and it shows.



Which country does the airline 'Iberia' belong to?

USA
West Germany Netherlands
Spain

AMIGA – Get the question right and you can move – get it wrong and it's hard cheese!

Amiga Version			
Great graphics, great music, great sound: what more do you want?			
GRAPHICS	9	IQ FACTOR	8
AUDIO	8	FUN FACTOR	4
ACE RATING 955			

The central board game is straightforward stuff some way below the level of draughts, the object of it being to wipe out the opposition. Zapping the other guy's (or the computer's) pieces involves moving adjacent to them and engaging them in combat. This is easier said than done, however, because of the way the game's quiz element intrudes.

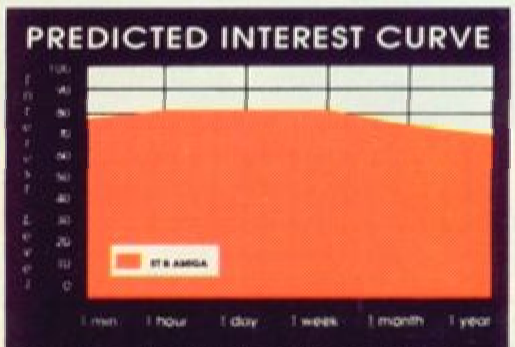
Before you can move your chosen piece, you'll have to choose the answer to a trivia question from four alternatives given. Get it right within the time limit and you get to move one square, adding to your piece's combat power into the bargain; get it wrong and your move is wasted. Once you're next to your intended victim you can challenge the poor unfortunate to a duel by bumping into him: then the fun really starts.

As soon as combat is joined, the scene changes to one of three arenas: Medusa's cave, a mountain-top or a lava pool. Here you're faced with a series of questions either against the opposing player or the clock. Get far enough ahead on points before your piece runs out of combat strength and the opposing piece turns to stone, falls in the lava or gets squashed by a large stone plinth.

The question-and-answer system cleverly gets round the problems of repetition: any given set of multiple-choice answers will be used with several different questions, so you can't simply learn the correct answer out of each group. More importantly, you've got to get the right answer quickly, so even when you've got the questions and answers off by heart – not something you'll manage easily – there's still plenty of challenge to it.

Atari ST Version			
Terrific presentation, with set-piece graphics and digitised sound that really show the machine at its best.			
GRAPHICS	9	IQ FACTOR	8
AUDIO	7	FUN FACTOR	4
ACE RATING 955			

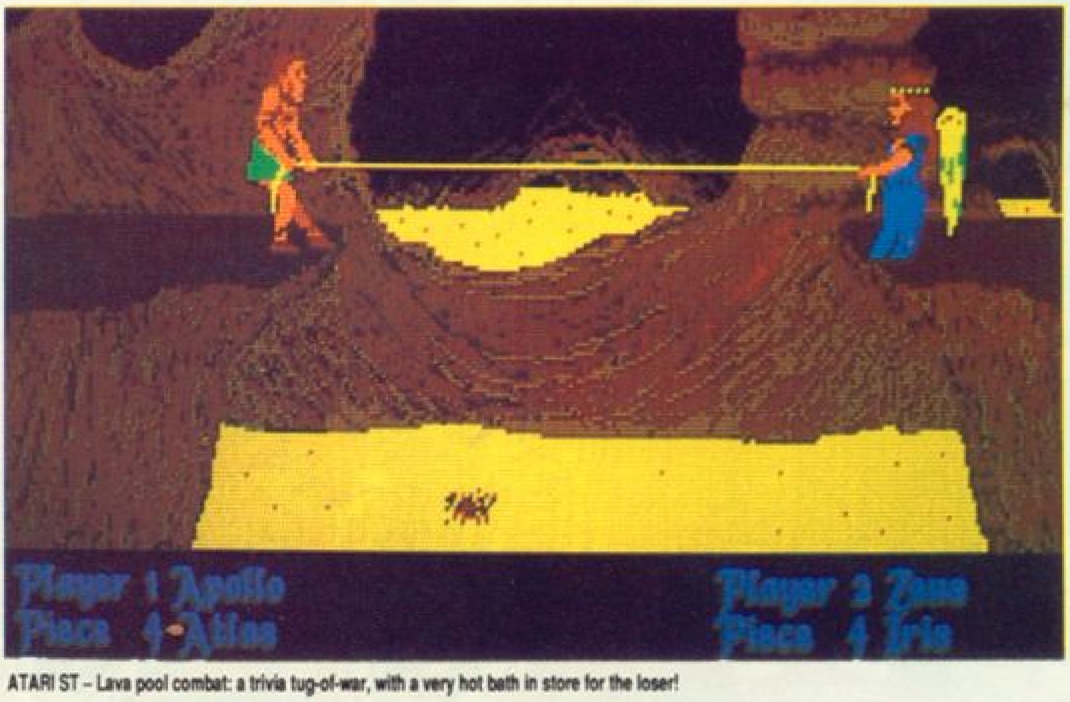
Meshing as it does with the board game side of things, the trivia takes on strategic interest. The squares of the board are colour-coded, each colour corresponding to a question topic: it's vital therefore to choose routes and attack strategies that keep you on the colours you like, so that you get questions you can answer. History and science buffs may well have problems if a crucial square gives them TV soap opera questions!



Even when you know the questions and answers, the game loses very little.

Overall it's very absorbing stuff indeed. If you only buy one quiz game, this has to be the one. If you weren't planning on buying a quiz game at all, take a look anyway: you may be pleasantly surprised!

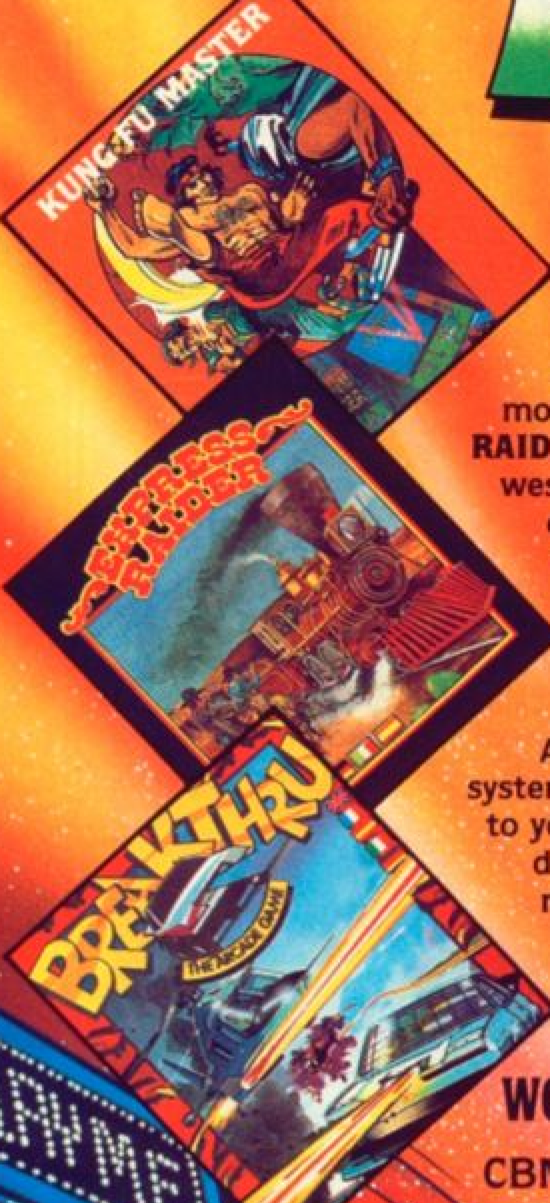
● Andy Wilton



ATARI ST – Lava pool combat: a trivia tug-of-war, with a very hot bath in store for the loser!

DATA EAST'S

ARCADE ALLEY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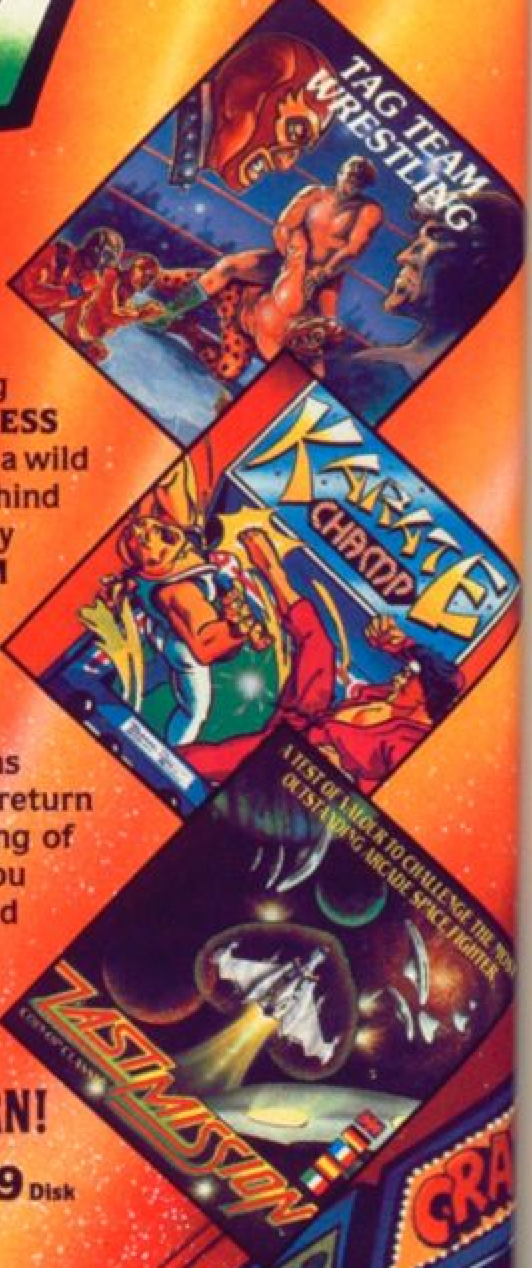
EXPRESS RAIDER
BREAKTHRU
THE ARCADE GAME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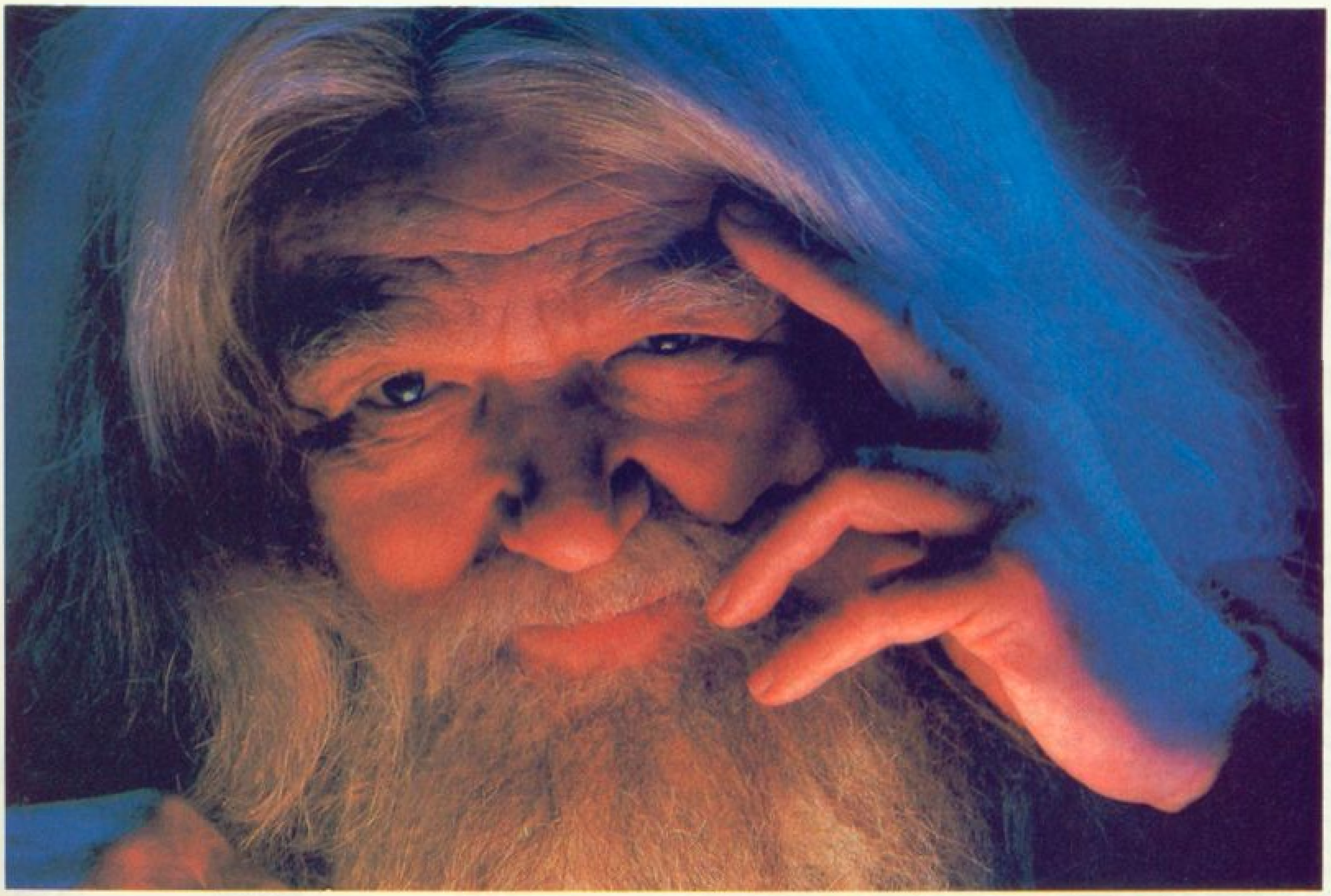


BRAIN GAMES

Shoot-em-ups may come and shoot-em-ups may go, but a game that actually gets you thinking can last you till you're old and grey. We present the ACE guide to the best in brain games, from chess and bridge through to real originals like Tetris and Boulderdash.

Intelligent games can be a bit of a problem for micros. When they're just presenting you with puzzles – as in *Xor* for example – the micro doesn't really have to think for itself, but once they start getting involved in human games it's a very different story. Chess and bridge are very complex things, and modern computers are ill equipped to mimic the way humans approach the mental challenges involved. Programmers have developed ways of looking at games that do work well on micros, however, with results that are in many cases very impressive.

When deciding on their next move, human beings tend to spend a lot of time working out how good one game position or arrangement of cards is compared to another – a process called *evaluation*. The positions they're evaluating could be next move, the move after or maybe even a dozen moves later: the process of working out what positions could possibly arise is called *look-ahead*, and this is what computers specialise at. To oversimplify a bit, humans tend to look very hard at the next few moves while computers concentrate on what the game will look like much further into the future.

How many moves ahead a computer looks depends on the type of game it's playing. If a game has a large number of possible moves each turn – a high *branching factor* , as the boffins say – this will vastly increase the number of positions the computer has to deal with. Chess has a typical branching factor of 30 or 40, so a look-ahead of five moves or so is about the limit for a home micro. Draughts, on the other hand, has a much lower branching factor – frequently there's only one possible move, because of "huffing" (compulsory capture) – so computer draughts games can look up to twice as far ahead. This ability to look further into the game suits computers well, which in part accounts for computer draughts players being stronger than the world's (human) draughts experts while the top computer chess programs still fall short of grandmaster standard.

Where games with concealed information or some random element are concerned, micros often have real difficulty. Bridge cardplay is notoriously hard to program, for example, because of the problems involved in working out not only which of his cards an opponent will play but also which cards he's actually got. Many programmers succumb to temptation and write games that take a peek at human players' hands, a practice that's got computer bridge (on micros at any rate) something of a bad reputation. Many people will put up with surreptitious cheating from computer games however, simply because they get round the problem of finding enough players to make up the numbers.

CHESS

Computer chess has come a long way from being a poor match even for a chimp. Nowadays, while a decent program might not be able to trouble Kasparov, it can certainly whup we lesser mortals.

There are several points to watch out for when considering the purchase of any program. For a start, what's the **display** like? Most decent programs these days allow you to swap between a **2D** and **3D** display. But this isn't necessarily as important as you might think; while the 3D display is more 'realistic', it can also be harder to see quite what is going on since the taller pieces can often mask pawns. While you can invert the board on most chess software, you don't really want to be flipping all the time. Whether you're playing in two or three dimensions, you need to be able to clearly differentiate between the pieces; you don't want to give the lame old 'Oh, but I thought it was actually a pawn' excuse, do you?

The **levels of play** the game offers is another crucial point. If there is a good spread from, say, 'beginner' up to 'grandmaster', you can be pretty sure that the program will provide people of nearly all abilities with an entertaining game.

Closely related to the levels of play is the **response time**. You want the computer to play as well as it can as fast as it can; any decent game should be able to play well with a 60 second time limit. This is usually to be found at level 3 or 4 on most programs. Some programs – *Colossus*, in particular – dispense with levels of play and instead allow you to set a response time for the computer. Naturally, the longer you let it 'think', the better it will play.

Erstwhile luxuries which have now become necessities are the ability to **invert** the board, **set up** problems, **change colours** and – extremely important for most of us – **take back moves**; this last factor can salvage a lot of hurt pride. A **force move** option is also a handy thing; if you're playing on a higher level it can take minutes for the computer to make its move and it's useful to be able to hurry it along. Try not to abuse the program; a victory where you've persistently forced the computer to move in two seconds is pretty hollow, isn't it?

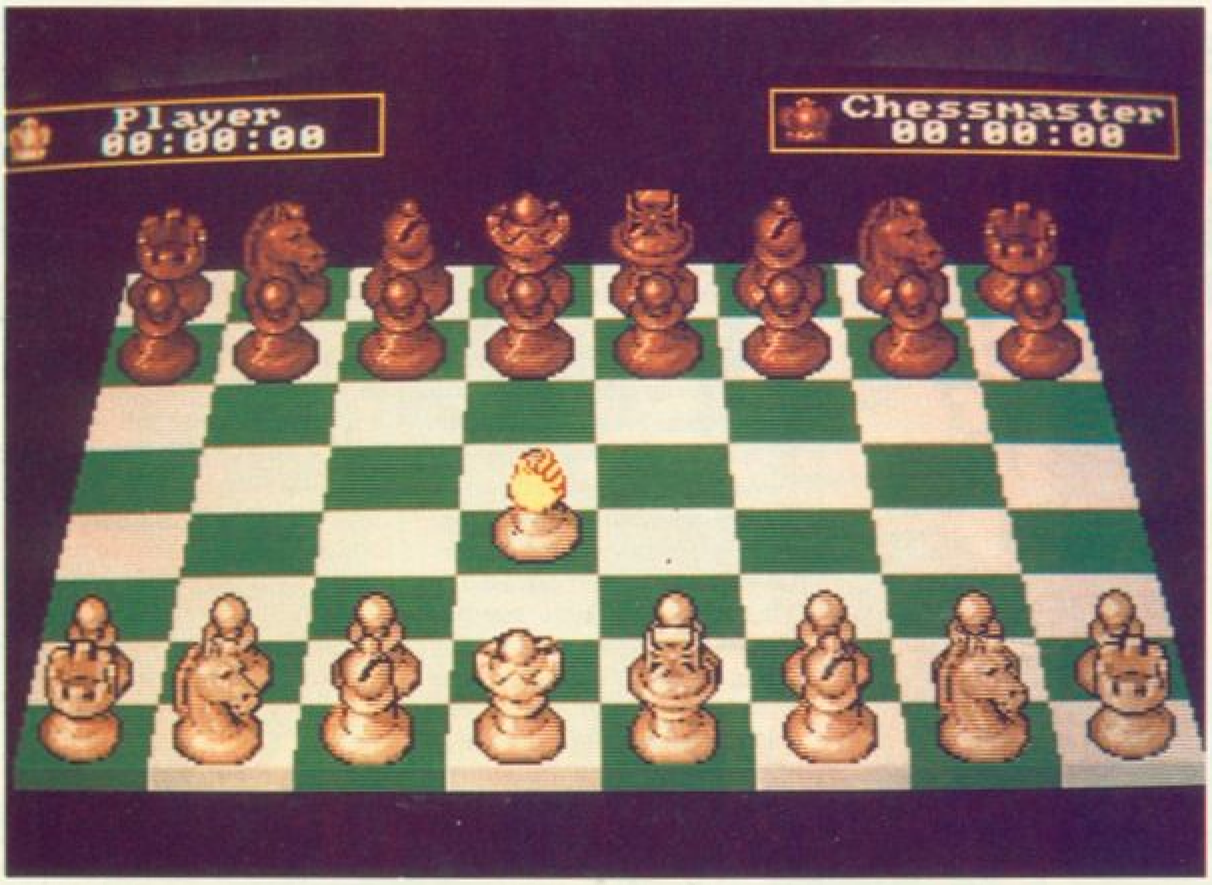
CHESSMASTER 2000

EA/Software Toolworks

Amiga	£24.95dk

The non-pareil of Amiga chess software. It's got just about every feature you could want, and a few more you probably don't. The display is excellent, whether in 2D or 3D, movement is easy, and the wizened chessmaster who welcomes you on the title screen plays a pretty mean game.

As far as we know, *Chessmaster 2000* is the only home computer chess program to feature speech. Most attractive extra is the 'boss key' whereby, at the click of a mouse button, you can conjure on to the screen an impressive, but thoroughly bogus, spreadsheet.



PSION CHESS

Psion

Atari ST	£24.95dk
IBM PC	£24.95dk
Macintosh	£24.95dk

Very slick program indeed; more so when you remember that it originated on the Sinclair QL (anybody remember that?) Again you get a choice of dimensions on the display, and the pieces are easily distinguishable.

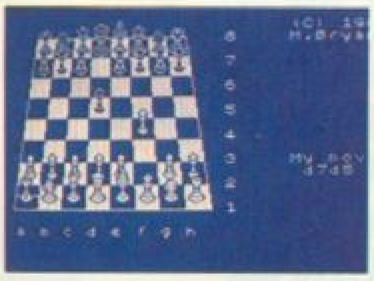
Psion's got lots of levels, and plays a pretty mean game from very early on. It's better on the PC than the ST – a much more pleasing display – but it is well worth considering for either machine. But don't rely on the games's hints, if you should request them; they can be a bit of a con.

COLOSSUS CHESS 4

CDS

C64	£9.95cs	£14.95dk
Amstrad CPC	£9.95cs	£13.95dk
Amstrad PCW		£15.95dk
Spectrum		£9.95cs

Very strong player, but not too hot in its 3D display mode; the pieces are not well-defined and it can be easy to confuse them. Perfectly



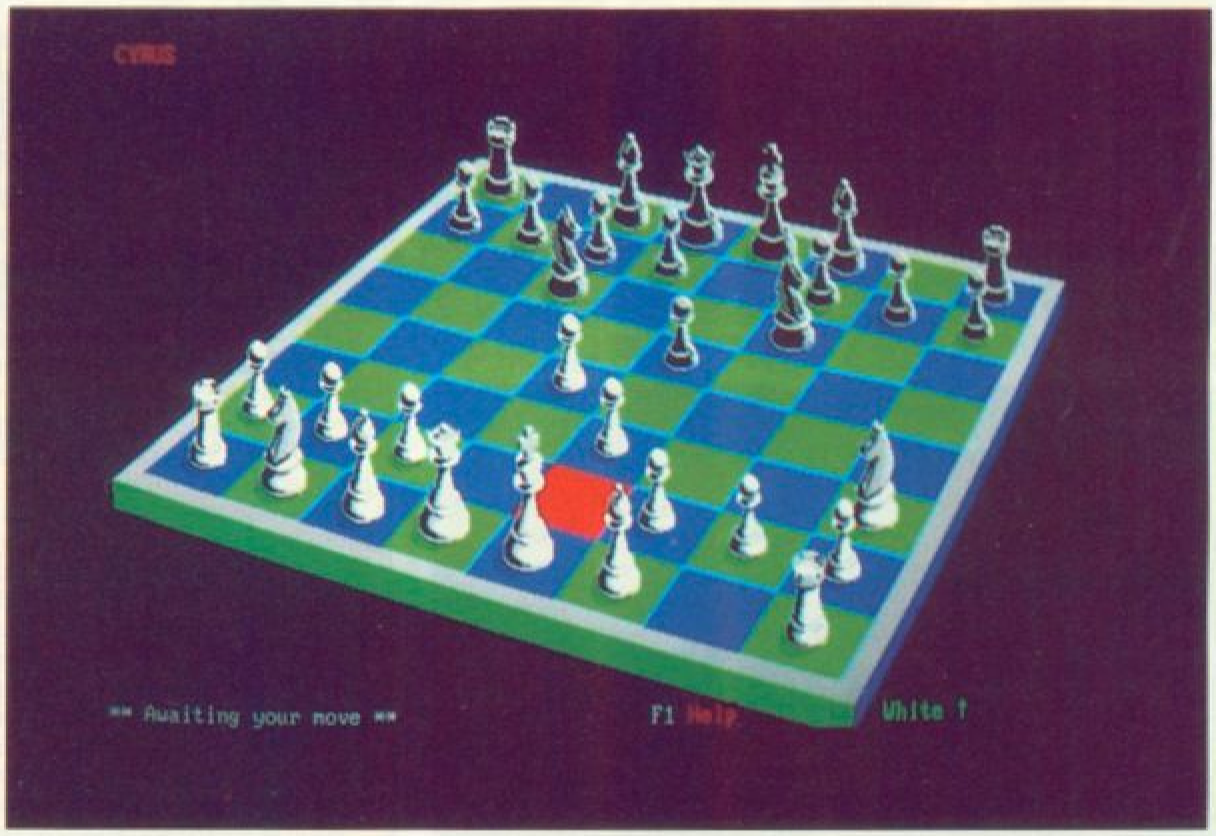
clear, though, in 2D mode. If strength of play is more important to you than smart graphics, then it has to be your choice.

CYRUS CHESS

Amsoft

Amstrad CPC	**£11.95cs £14.95dk**

Certainly the prettiest chess game for the CPC range, and particularly nice in 3D; the pieces are marvellously shaded to give a great impression of solidity. It has all the features you could want, but is not as strong a player as *Colossus 4*.



BRIDGE

All computer bridge games work to a similar format. You play South, against two computer opponents East and West, and with a computer partner, North. All offer randomly dealt hands, the auction and card play, and will score for you, according to the rules of Rubber Bridge. Virtually all calculate the relative strength of hands by the Acol high card/distribution point count.

Compared to good human bridge players, computer simulations are fairly primitive, micros being notably short on flair and intuition. Home computer bridge programs do not work out probabilities of card distribution according to bidding, do not account for the vulnerability/part scores in the bidding and implement virtually no card play conventions (such as petering).

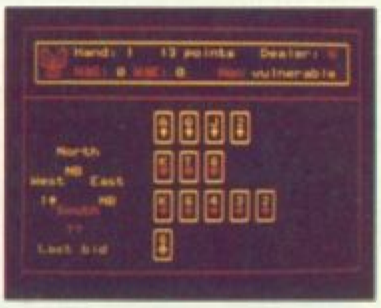
COLOSSUS BRIDGE

CDS

Spectrum	**£11.95cs**
Amstrad CPC	**£11.95cs £14.95dk**
C 64	**£11.95cs £14.95dk**
Amstrad PCW	**£15.95dk**
IBM PC	**£15.95dk**

This programs's intended for beginners and learners, and is packaged with H. Fox's book *Begin Bridge*. It offers both random hands and hands with a certain point count for those who get tired of passing all the time. There are lots of options for rebidding, reviewing, and replaying hands, or peeking at your opponent's cards, and the computer will understand and initiate both Stayman and Blackwood conventions.

Colossus bids strictly according to the conventional Acol point counts/distribution, with the occasional inexplicable call made by by the computer just to throw you off balance. Card play is similarly uniform. It will draw trumps, then lead out strong suits. It also finesses sometimes – although not only when it will be successful.



With its replay options and tutor program, *Colossus* is a very good choice for those getting to grips with the game. The screen display is clear and easy to understand, though functional rather than pretty.

GRAND SLAM

Serin Software

(PO Box 163, Slough, Berks.
Tel 02814 3180)

C64	**£8.95cs**

Nearly four years old, and rather ponderous compared to recent programs, but it still provides a viable (and cheaper) alternative to *Colossus* on the 64. The computer handles conventional doubling, Stayman and Blackwood, and strong/weak/variable no-trump openings.

Grand Slam offers simple replay, view hands and abandon hands options, and both bids and plays predictably and stolidly. The screen, while unexciting and with no use of graphics, is very clear and easy to follow. No tutorial or demo features are available for beginners.

BRIDGE PLAYER II/BRIDGE PLAYER 2000

CP Software

Amstrad PCW	**£19.95dk**
Atari ST	**£18.95dk**
IBM PC	**£19.99dk**

CP's *Bridge Player* series appears under a number of variations; the above are the recommended versions. The program is similar in style to *Colossus*, though with fewer options, and slightly fewer conventional features. The computer will not for instance initiate Stayman or Blackwood conventions, but will respond appropriately if you make the first call.

While the computer generally bids with frustrating timidity, so that you will often underestimate the strength of your combined hands. It is also capable of making wildly optimistic bids on occasion, just to keep you on your toes and really land you in it. When defending a contract, you can frequently bring East-West down if trumps are split unevenly, since it doesn't seeem to have been coded to draw trumps particularly efficiently. Nor does it finesse.

Like *Colossus*, *Bridge Player* is suitable for newcomers to the game. In addition to replay and rebid options, it also has a demo mode where the computer plays through bidding and hands for you, to act as a kind of tutor option. The Atari ST version includes a tutor which takes you through 20 hands wiht explanation and analysis.

INFOGRAMES BRIDGE

Infogrames

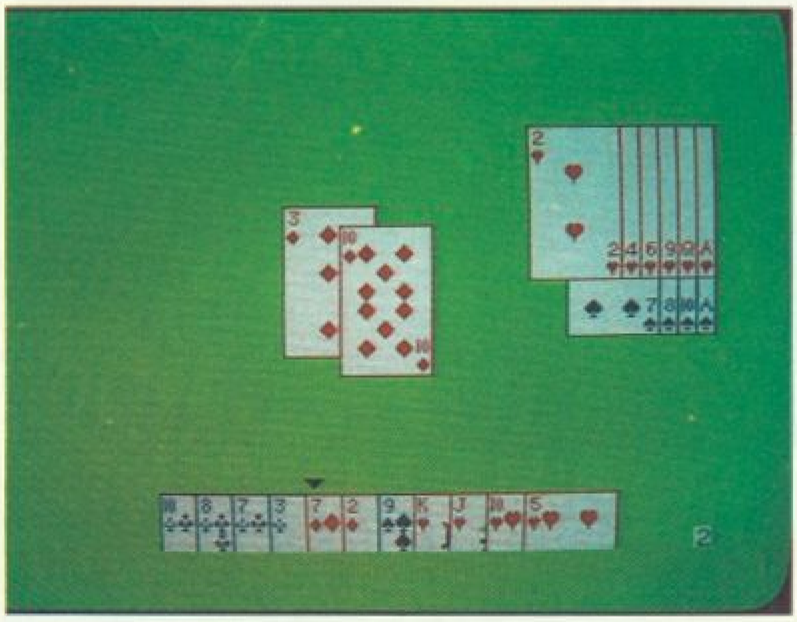
Amstrad CPC	**£12.95cs£15.95dk**
MSX	**£12.95cs £15.95dk**

Probably the best home micro bridge on the market – but sadly confined to the two machines above. It's certainly one of the few that attempts a pleasing graphic display, with pictures of the cards dealt on a suitably green baize-look background.

Particularly strong is the range of conventions available, with Stayman, Strong/weak/variable no-trump, Gerber, Blackwood, Five-card majors all included. These can be toggled on or off according to your preferences.

Bidding and card play are on a par with its competitors, although the computer's bidding, in general, appears to be bolder than in most other bridge programs.

Infogrames Bridge is not, however, so well suited to beginners. There is no 'tutor' option, and screen information pertaining to the contract being played, or which team is declaring/defending, is somewhat scanty.



PUZZLES

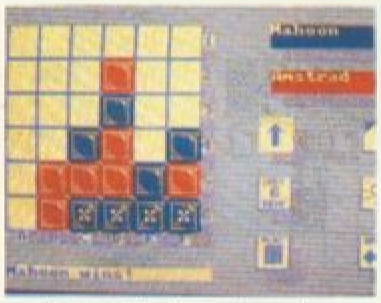
THINK!

Firebird Silver

Amstrad CPC	£1.99cs
Spectrum	£1.99cs

A wonderful idea: make up a boardgame of pure skill, and computerise it. Originally full-price on Ariolasoft you can now pick it up as a budget brain twister, and excellent value it is too.

It's a simple looking game, but appearances are misleading. Your aim is to make a horizontal, vertical or diagonal line four pieces long on the game's six by six board. You and your opponent (human or computer) take turns to push counters onto the lower or right-hand edges of the board. As the counter pushes onto the row, any counters already on the row move up or left one square. If this takes them off the edge, they disappear and are lost for good. There's no limit to the number of turns: you just keep playing till somebody wins.



The game has interesting subtleties to it and the computer opposition can be very tough indeed on the harder settings, but it's still hard to pin down quite what makes it so maddeningly addictive: probably just that it's a simple idea very well implemented. A must buy for Spectrum and Amstrad owners, in any case.

BOULDERDASH

Prism Leisure Corporation

Spectrum	£2.99cs
Amstrad CPC	£2.99cs
C64/128	£2.99cs

Arcade in style and requiring a considerable amount of hand-eye coordination this fine old piece of high-speed excavation is nevertheless a tough challenge for the grey matter.

Your job in each of the game's caverns is to dig for gems, but your progress is hampered by boulders, underground creatures and some rather strange weed. These have rules of behaviour which are quite easy to learn, but actually using them to your advantage can take a fair old effort of the brain – especially considering you need the answers in seconds rather than minutes.

SCRABBLE

Leisure Genius

Spectrum	£9.95 cs
CPC	£9.95 cs £14.95dk
C64/128	£12.95 cs £14.95 dk
MSX	£9.95 cs
Deluxe Version	
Spectrum 128K	£10.95 cs £15.95 dk
CPC 6128	£15.95 dk
C64/128	£12.95 cs £15.95 dk
IBM PC	£24.95

Psion caused quite a sensation with their first version of computer Scrabble for the Spectrum. It appeared just over three years ago and was remarkable for squeezing an 11,000 word dictionary into the 48K machine, together with a high degree of intelligence. As a result, many players discovered that Scrabble, like Chess, is a game that can be very satisfactorily played against a computer opponent.

Fings ain't wot they used to be, of course, and now *Scrabble* is available from a different company – Leisure Genius (owned by Virgin) – and for additional machines. The original Psion version is still sold for the Spectrum, again by Leisure Genius, and there are also faithful conversions for most other formats. Notable exceptions are the ST and the Amiga, but we're promised an ST version for February this year.

Playing Scrabble against a machine has certain advantages. To start with, you can be sure that the machine won't cheat. The words it chooses are in its vocabulary (which has been checked by an 'official Scrabble expert'), not in its imagination. If *you* cheat, entering a word that's not on the computer's list will cause it to challenge you – but simply reaffirming your decision will get it to back down. Cheating, therefore, is a matter for your own conscience and not the computer's adjudication.

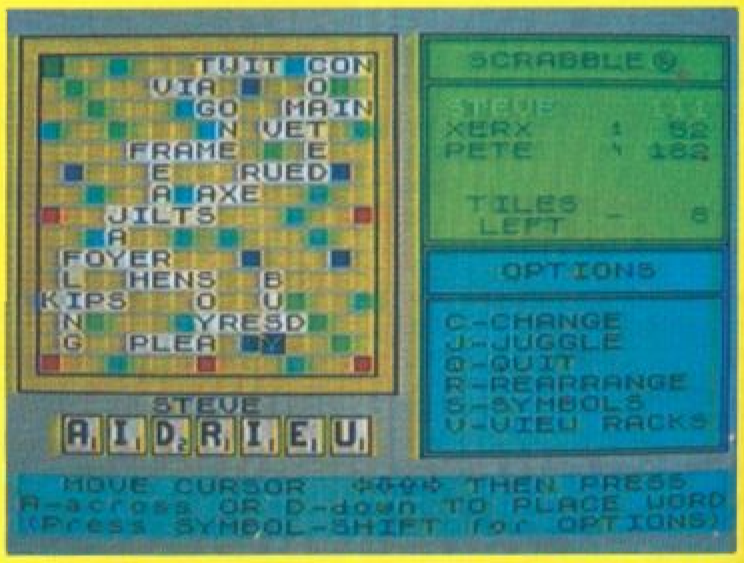
To complicate matters, Leisure Genius have also released *Scrabble Deluxe*. This offers a vocabulary ranging from just under 20,000 words on the Commodore to just over 23,000 on the PC. In addition, the number of skill levels has been increased from four to eight – a significant improvement since it enables you to match your own skills more accurately against your computer opponent.

.The Deluxe version also has a game-clock for timed play and an improved algorithm that speeds up the 'thinking time' for computer players at high skill levels. You should definitely pay the extra for this later version – in fact on the Commodore it's the same price, so no excuses.

All versions allow up to four players, of whom any number can be computer controlled. Various game-play options include shuffling the letters on your rack (helps to spot possible words) and asking for hints. All normal play conventions are supported.

One thing you will need, however, is a pencil and paper if playing with other humans – so you can jot down the letters on your rack before removing them from the screen display. You can choose to have all racks on permanent display, but this makes cheating rather easier and can be particularly serious at the end of a game when you're deciding whether to go out or hang on in the chance of getting that Q onto a triple-letter-score square.

Along with chess, *Scrabble* is one game that converts excellently to computerised play. Fans of the game can at last play without having to seek out other addicts, and cheats can win every time.



MOVE CURSOR THEN PRESS A-across OR D-down TO PLACE WORD (Press SYMBOL-SHIFT for OPTIONS)

Scrabble on the Spectrum - there's little difference between the formats, but this one remains one of the most impressive.

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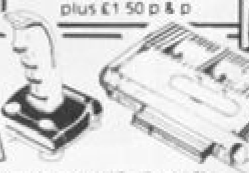

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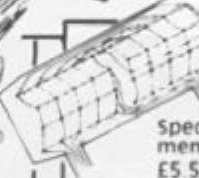

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The pressure and variety the game offers make it enormously addictive and certainly a bargain at budget price, but if you don't know one end of a joystick from the other or are just looking for a quiet evening's cerebral entertainment you'll probably find its arcade leanings too pronounced.

SKULLDIGGERY

Nexus

Atari ST

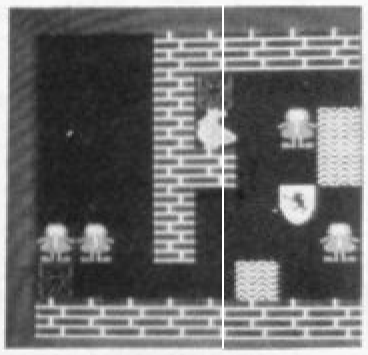
Based very closely on *Boulderdash*, this tricky little customer has a nice split-screen option for two player puzzling, and works with mono as well as colour ST systems. Unfortunately, its publishers Nexus have recently gone into liquidation so you may have a job getting hold of the game. Hurry while stocks last!

XOR

Logotron

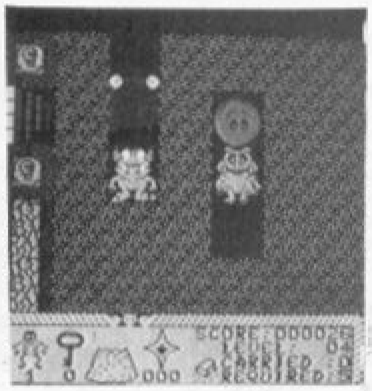
Spectrum	**£7.95cs**
Amstrad CPC	**£9.95cs £14.95dk**
C64	**£9.95cs £12.95dk**

Fifteen giant mazes full to the brim with puzzles provide the challenge in this enormous test of spatio-visual logic. The maze components – fish, chickens, H-bombs, V-bombs, dollies and forcefields among others – behave according to strict physical rules, so you always know what they're going to do in any given circumstance.



By shunting these objects around with your two shield-like explorers you can unlock the tricky formations in your way and get at the masks you need to complete each maze – but only after some very careful thought. It's easy to work out what an individual object will do when shunted, but since one object can set others in motion it's perfectly possible to trigger a fish-chicken-bomb avalanche by an ill-considered move.

There's no time-limit to the game and no manual dexterity required, but clarity of thought and attention to detail are vital. You'll also need considerable imagination to think your way sideways out of problems. A classic game for brains!



BONECRUNCHER

Superior

C64	**£9.95cs £11.95dk**
Amiga	**£14.95dk**

Entertaining little maze puzzler somewhere between *Xor* and *Boulderdash* – see main review on page 41.

3D Tic-Tac-Toe

This distracting little game – better known to we Brits as Noughts and Crosses – takes the form of a Macintosh desk accessory so you can play it in the middle of doing something far more useful. The four grids stack up one on top of the other, so you can make perfectly valid lines diagonally or straight up. You'll have to do the stacking in your head, making some lines very difficult to spot. Of course, one line's exactly the same as another to the Mac, so beating it can be a tough proposition.

TETRIS

Mirrorsoft

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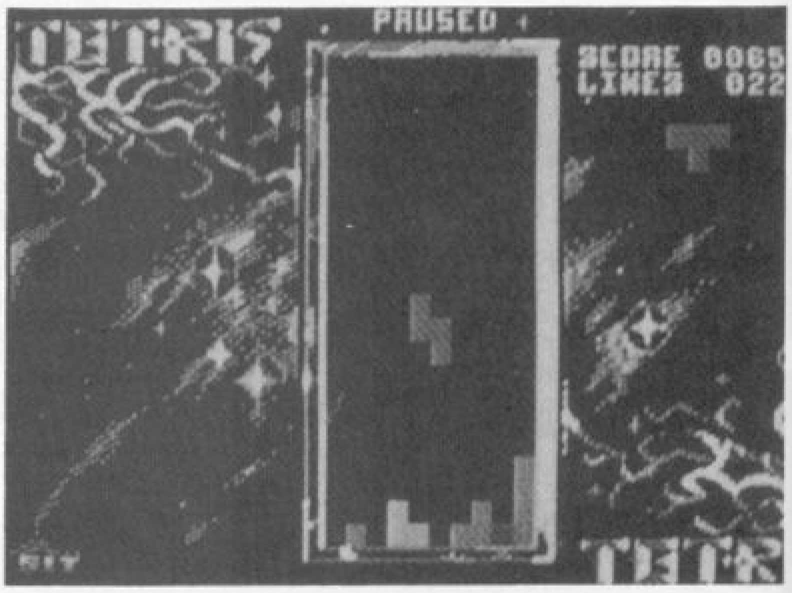
A fascinating geometrical oddity, this Russian puzzler turns the obscure mathematical topic of packing into a cult game. One at a time, shapes fall downwards into a rectangular playing area. Left to their own devices they'll pile up until they reach the top of the screen: your task is to guide them down and pack them in tightly so that this doesn't happen.

If you can dovetail the different shapes together that they form a solid row from one side to the other, the row disappears and the shapes above fall down into the gap this makes. As long as you keep this process up you'll survive, but it's not easy: the game speeds up as it goes along for one thing, and small mistakes will raise the heap giving you less time to guide the next shape down.

Different versions of the game have proved to be rather variable in their arcade aspects, but the brilliantly simple idea behind them means they're well worth a look whatever your machine. ●



Where now for brain games?

Micro chess has just about reached the limits of what most home players need in the way of strength, speed and flexibility. Programmers are turning their attention to other, more obscure games – with some considerable success, it has to be said – but after a while they're pretty much bound to run out of games anyone's heard of or wants to play.

One possible direction is to create games especially for computers: games that just wouldn't work in the physical world. Display problems aside, 3D games should work admirably on home machines with the micros exploiting their better grasp of the situation to defeat that renowned human ingenuity. With icon and mouse available there'd be no need for complex notation systems, and advances in the field of 3D computer-aided design might well have lessons for programmers trying to display solid objects clearly.

Another direction worth pursuing is that of machine learning. If a program can work out and improve basic strategies for games solely on the basis of the game rules – there's been a certain amount of work done on this with draughts programs – it may be possible to create 'construction kits': games with DIY rules which the computer adjusts itself to. Load the system up, create a pseudo-chess on a 12x12 board with fifteen different kinds of piece, and see how the computer copes just using general principles. Will you handle the unfamiliar situations better than it can?

Mr Spock – playing a game of the future?

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RAMPARTS

Infinite energy!

This handy infinite energy poke should help any C64'ers having trouble with this game. Simply type in the listing, run it, and load the game from the start.

```
20 PRINT CHR$(147)
30 FOR B=1024 TO 1060:READ A:POKE
B,A:NEXT B
40 SYS 1045
50 DATA 169,13,141,189,8,169,4,141,190
60 DATA 8,76,16,8,169,173,141,107,54,76
70 DATA 5,12,32,86,245,169,0,141,100,8
80 DATA 169,4,141,101,8,76,16,8
```

IAN INMAN, Watford.

AGENT X2 – Codes cracked!

AGENT X 2

Those elusive codes for levels two and three on the C64:

Code for level 2 = GORMENGHAST
Code for level 3 = MEGALOMANIA

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1 Here comes ol' flat top.
2 There's no escaping it.

Mr R.C. JOHNSON, Doncaster

TEST DRIVE

Get to the Dealership a little easier with this handy little tip for the Amiga.

To avoid going over the cliff or crashing into the walls – indeed to aid you in your general cornering – simply keep the fire button pressed. The car will then just glide around corners without any trouble. Of course you'll still have to avoid the other road users and release the fire button should you wish to accelerate or brake.

M. GEORGIADES, London.

TEST DRIVE – Make it to the dealership.

BUGGY BOY – Take your time

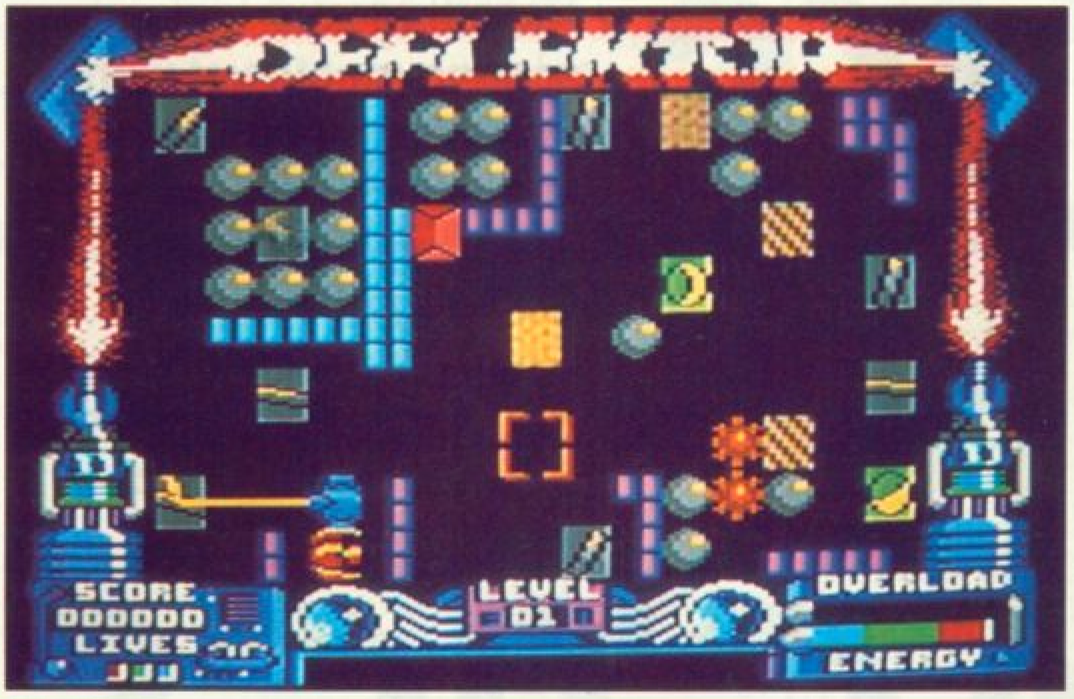
BUGGY BOY

Infinite time

This wonderful car game can now be played a lot easier thanks to this C64 poke. Type in the listing, run it, and start the game tape from the beginning.

```
10 I=576
20 READ A:IF A=256 THEN END
30 POKE I,A:I=I+1:GOTO 20
35 SYS 576
40 DATA 166,43,134,195,164,44,132,196
50 DATA 32,86,245,169,88,141,243,3
60 DATA 169,2,141,244,3,76,13,8
70 DATA 104,104,169,107,141,26,4,169
80 DATA 2,141,27,4,169,55,133,1
90 DATA 76,0,4,169,96,141,9,156
95 DATA 76,0,8,256
```

TIM AND IAN FRASER, Ruislip.



● LEVEL ONE

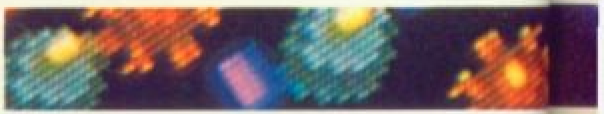
Hints:

This screen was designed to introduce the player to as many characters as possible. The screen shows the usefulness of revolving mirrors, refractors, fibre-optic cables and polarisers. No great difficulties here, and a chance for the expert to accummulate points.

General Tips

You enter and leave a fibre-optic in the same direction.

If those Gremlins have been causing you headaches in this 900+ Gremlin/Vortex brain-stretcher, never fear because Vortex's very own LUKE ANDREWS is here to show you the light...



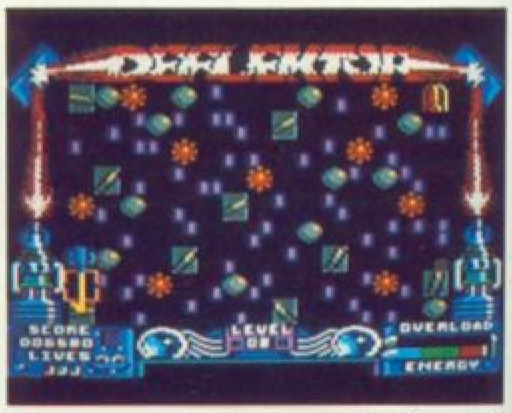
DEFLEKT

The excitement generated from a new purchase usually forces the player to load the game immediately and try to play it. This is not the recommended course of action with any game, let alone *Deflektor*, because it will get you nowhere. Read the instructions and try to memorise the characters including what they may or may not do. So with the aid of the inlay card and the multi-load system which scrolls the instructions across the screen while the rest of the game is loading, we are ready to play.

To play the game through you'll need to set aside a couple of hours at least, but if you wish to practise first, the facility is there. A *demo* mode enables you to view all the screens, and if, while you're actually playing, you wish to view a screen and then plan your attack or have a break, then there is a pause mode, or 'intermission'.

The aim of the game is to link the transmitter beam to the receiver. Before you can do this, however, you have to destroy all the Cells left behind by the Gremlins that still roam around various screens. You will see the Gremlins on your travels, still twisting and turning the mirrors – probably to your annoyance. Once the energy levels have built up, the beam is activated. The beam will always hit the first mirror and deflect accordingly. You will notice the mirrors flickering around during energy build up (during which the mirrors can be moved), so it's not guaranteed that you will hit the first mirror favourably. At the start of each screen you should turn the first mirror full circle – you will then experience either energy loss, a direct hit on a Cell, a link with another mirror, a link with another character or the screen perimeter. The object is to hit a Cell or another mirror that is in a position to hit a Cell.

The game concept is the same for all machines, but the screen layouts are sometimes different and speed varies from machine to machine. On the Amstrad, programmer Costa decided to use the *hi-res* mode for clarity, crispness and definition, as opposed to using extra colours, which would have meant chunky and irregular graphics not at all suitable for *Deflektor*.



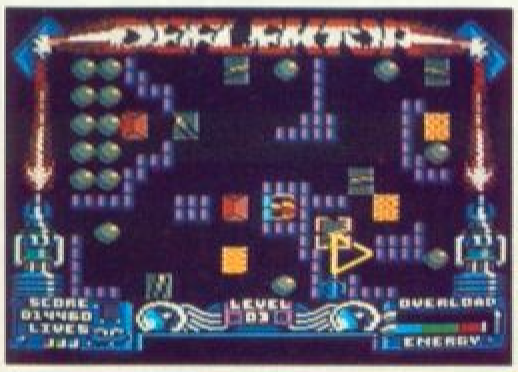
● LEVEL TWO

Hints

Beware of overload, absorbing blocks sap power. The middle Cell of the top line is the main problem, though the added mines can be a headache. Plan the route, because it's easy if you think about it. Can catch you out, though, if the mirrors are not in your favour.

General tips

You have more time than you think. Move away from danger and let your energy build up again.



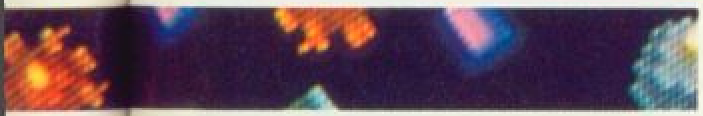
● LEVEL THREE

Hints

Problems from the start. Make sure the first mirror is in your favour, otherwise instant death awaits. Gremlins make their first appearance. Bottom Cell is the main problem – destroy it by using the refractor and bottom right hand mirror. Last of the easy screens.

General tips

Remember, mirror to mirror is not always direct – you may have to bounce the beam off walls or other things. Gremlins can be a help as well as a hindrance.



TOR

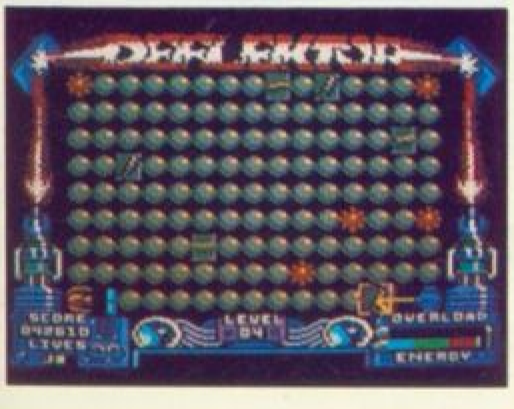
● LEVEL FOUR

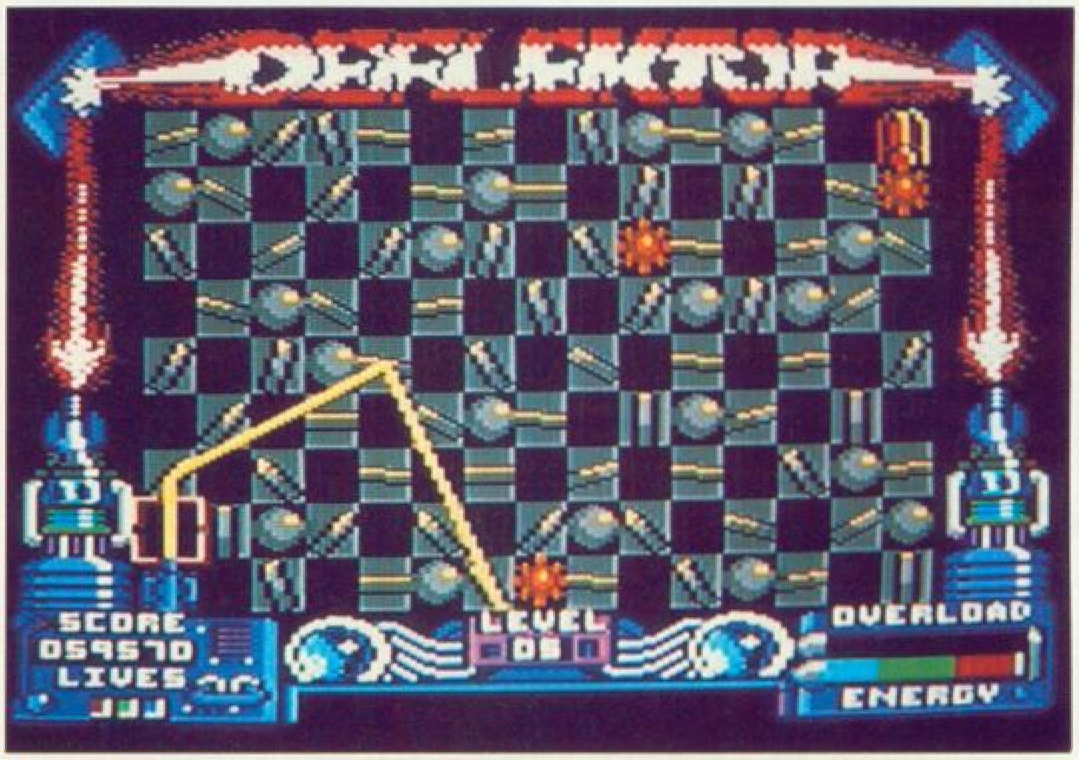
Hints

This is the first shoot-em-up screen. They will get harder. You can destroy all but a few Cells by direct mirror rotation. The rest can be destroyed by using the revolving mirror and deflecting the beam with the extreme right-hand mirror.

General tips

Vapourised Gremlins re-appear. Watch your energy levels. Fancy routes can lengthen the beam and cause overload. Do not force the beam back on itself, it will self destruct.





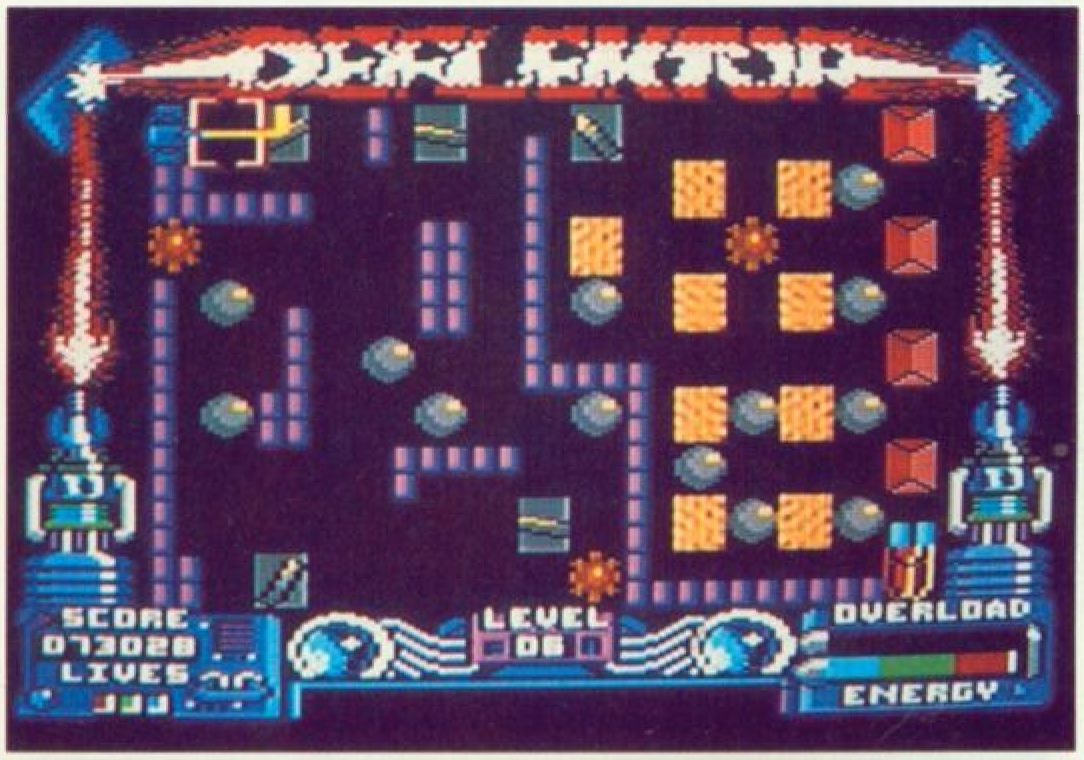
● LEVEL FIVE.

Hints

The first of the 'Hall of Mirrors' screens – if you think this one's hard, you have a shock in store. Energy loss or Gremlin interference could prove to be your downfall on this screen. Remember – if you can't destroy with one mirror, move on to another.

General tips

Make the most of the 'intermission'.



● LEVEL SIX.

Hints

There are two sections to this screen. Destroy the first series of Cells, but be careful of overload. Polarisers and refractors do the main job (if you're lucky).

General tips

In screens that are sectioned-off you can avoid Gremlins by vapourising them and hoping they re-appear away from trouble. React quickly to alarm bells and warnings, but don't panic!

STAR TREK

Is the mission taking you about five years to complete? If so these tips will prove invaluable.

Key:
R=Regional zone. L=Local zone. QZ=Quarantine zone.

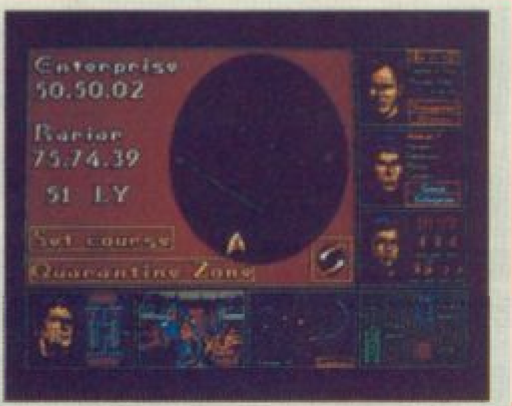
I-Beam generators can be found on:-
1 Cernen 64:67:11 Klingon
2 Heniez 46:63:26 Klingon
3 Molion 66:70:30 R-Klingon (pods)
4 Bolius 37:70:55 R-Klingon (pods and guard)
5 Raniem 10:62:38 R-Klingon
6 Parlur 79:72:70 R-Klingon
7 Lerner 76:67:85 L-Klingon
8 Ganiez 46:62:64 R-Klingon
9 Tiliul 25:70:67 QZ-Klingon
10 Sonax 86:64:41 R-Klingon (guard)

Lepton guns can be found on:-
1 Lorlol 71:25:84 Federation
2 Nuziol 72:47:81 R-Romulan
3 Zersur 31:37:49 QZ-Independent
4 Toziuz 49:94:66 R-Federation
5 Sakiel 70:50:41 QZ-Klingon
6 Xuner 28:17:46 Federation
7 Somum 61:10:41 R-Klingon
8 Hamul 25:56:76 R-Klingon
9 Perriaz 45:31:21 R-Klingon
10 Vorsiuk 55:85:25 R-Federation

Signals Console planet:-
1 Romok 53:10:38 L-Klingon (guard)

Klingon codes file planet:-
1 Moliul 25:70:29
2 Birnan 62:76:55 L-Klingon (need Fluox)

Blackmail file planet:-
1 Manak 50:14:30 R-Klingon (need Fluox)



Psychogen planets:-
1 Kuxam 56:41:58 R-Federation (pods)
2 Dozox 89:46:50 R-Romulan (pods)
3 Bikes 34:52:55 R-Klingon
4 Mines 34:64:79 R-Federation
5 Danian 63:62:51 R-Federation
6 Sakien 15:50:42 L-Klingon
7 Tariax 39:74:18 QZ-Independent
8 Zarral 20:30:48 R-Klingon
9 Bisiul 25:82:53 R-Romulan
10 Gesium 61:33:16 R-Romulan
11 Zorziuk 55:97:49 R-Federation

Rebel commander planets:-
1 Sisus 85:34:43 R-Federation (need Fluox)
2 Henax 38:15:75 R-Federation
3 Lorsun 19:37:37 L-Federation
4 Lorren 64:79:83 R-Federation
5 Dakiak 51:50:50 QZ-Federation

Dilithium Delta 6 planets:-
1 Gesok 53:81:64 Klingon
2 Verkas 32:55:25 L-Independent

Peace Virus Ampoule planets:-
1 Tenak 50:15:67

STUART WYNNE, Chester.

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100 DATA
32,86,245,169,25,141,97,3,169,207,141,98,3
110 DATA
96,169,173,141,211,144,141,247,144,108,253
120 DATA 0,14,207
130 FOR L=52992 to 53019:READ
A:C=C+A:POKE L,A
140 NEXT:IF C=3464 THEN SYS 52992
150 PRINT "DATA ERROR":END
```

THE DOUBLE ACES 88, Cleveland.

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Every month we give away ££££'s worth of software to the readers who send in the best playing tips, maps, pokes and hi-score tactics. If your contribution is selected as Tip of the month you can expect to recieve six top-rated games for your machine, specially selected by the ACE team, completely free.

This month, Stuart Wynne's *Star Trek* tips earn him free copies of *Scruples, Rampage, Defender of the Crown, Powerplay, Tanglewood* and *Bubble Bobble* for his ST.

Ian Inman wins himself a copy of *Scruples* for his C64 as do Tim and Ian Fraser. The Double Aces also pick up a copy of the game for their C64, as does Lee Rowland.

Mr R.C.Johnson, however, earns himself a copy of *Sorcerer Lord.*

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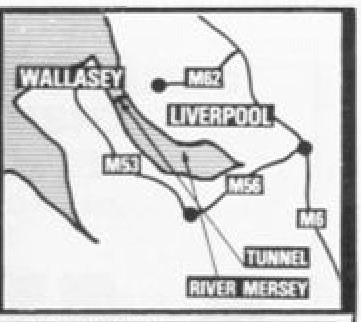

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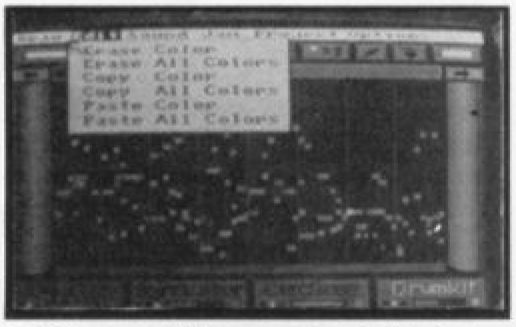
MUSIC MINUS MIDI

Fed up with MIDI? Can't afford it? Then check out our list of budget, non-MIDI musical packages for your micro. Mark Jenkins checks out what's available...

Professional and semi-professional micro music is all about MIDI these days, but there are those of us who don't want to spend hundreds of pounds on MIDI-equipped synths and samplers, but would still like to persuade our micros to bleep along in a vaguely musical manner.

Scores of packages have been released to allow you to do just this. If you have a Commodore 64/128, a BBC Micro, an MSX, an 8-bit or 16-bit Atari, a Spectrum or an Amiga, then check out our musical rag-bag of different music systems for different micros, with the accent on budget prices and packages that enable you to get the best out of what you've got – your computer's sound chip.



Instant Music – each dot/line represents a note; different colours indicate different instruments – pity this page is black and white!

● INSTANT MUSIC

Electronic Arts

Amiga	£24.95dk
C64/128	£9.95cs £14.95dk

This funky, colourful package is aimed at the micro user who wants to make music but gets a little apprehensive at the sight of standard manuscript notation or the mention of sound chip registers, harmonics, and voice parameters.

The package allows you to compose with the four-voice built-in FM sound chip. The main screen shows the tune you've loaded (or created), with a menu bar above and those instruments you've currently selected listed below.

What makes Instant Music different is its use of colour and its method of entering notes. Each instrument is associated with a specific colour, and once it's selected you can use the mouse to enter a series of coloured dots/lines marks on the screen. The vertical position of the lines determines their pitch and their length the duration of the note played.

A tune therefore has a strong visual element to it, which can be very appealing to a beginner. You can have a lot of fun just waggling the mouse across the screen and hearing the effects. This is probably the closest you'll actually come to 'painting with music' on a micro.

There are stacks of demos in all styles, covering rock, pop, jazz, blues, folk, classical, and even minimalist styles. the 'Parent Directory' lists all the styles and sub-directories list the demo pieces, which include some simple chord progressions to help in your own compositions.

Pull-down menus include DRAW, EDIT, SOUND, JAM, PROJECT, and OPTIONS. JAM is the most fun – it lets you play any of the four voices 'live' with any sound using the mouse (zipping it up and down the music grid), both functions limiting the notes and rhythms available to fit in with the backing music.

The package offers a peculiar set of compromises between complete freedom and helpful 'play-along' type features such as auto-rhythm and scale-following, quick drawing of notes and chords, and so on. It's not fantastically easy to compose complex tunes with, but it's not difficult to create something – and very easy to have fun with.

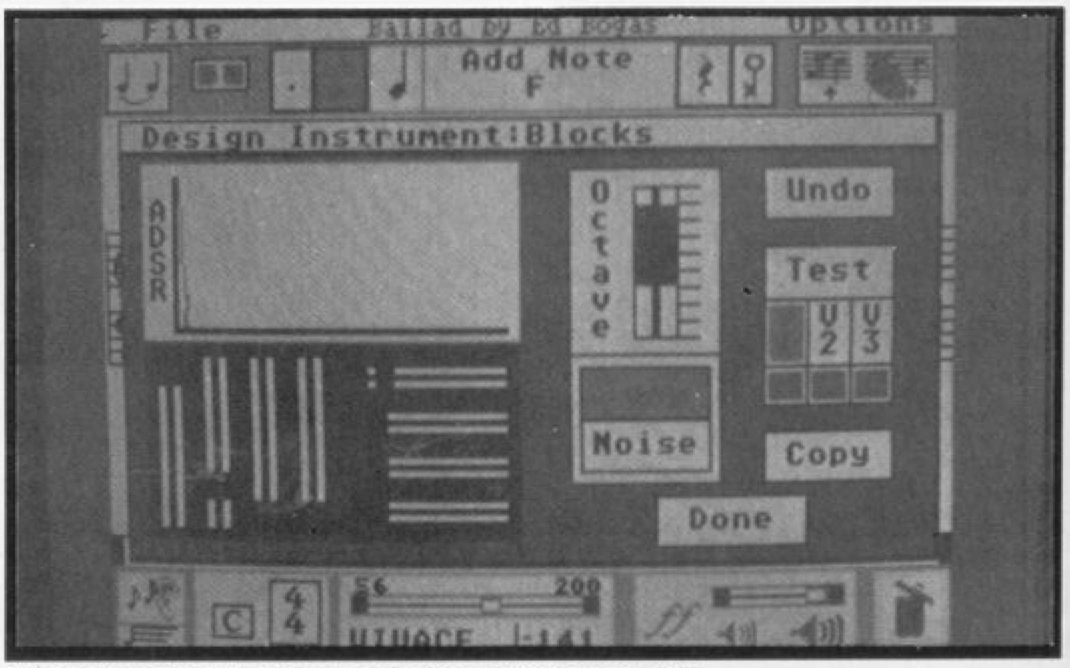
● MUSIC CONSTRUCTION SET

Electronic Arts

(Deluxe version)	
Amiga	£69.95dk
Apple Mac Import – contact your dealer.	
(Standard version)	
Atari ST	£24.95dk

This suite of programs provides both control of your computer's sound chip and the means to build up professional pieces of music – scoring, transposing, and editing your work as you proceed. In short, it's a powerful package designed for those who know a bass clef from a bar line.

But that also means it's a useful educational tool, since the manuals are comprehensive, and anyone with even a superficial knowledge of music theory will find them-



Deluxe Music Construction Set on the Mac – this package scores (geddit?) in every department.

selves using the package with ease. You won't get any 'play along' features as you do with *Instant Music*, but you do get the facilities to enter tunes at the keyboard, or to place them directly on the manuscript using the mouse.

There are extensive editing facilities, and the package provides a reasonable number of different instrumental voices which can be written into the scores, giving you a clear idea of how your composition would sound 'live'.

The essential concept behind the standard and deluxe versions is the same, but you may find some versions missing from the ST program. Goodies available in the Mac version, for example, include provision for lyrics, comprehensive scoring functions, voice editing, MIDI functions, and quality output of your score to a laser printer if required.

Excellent packages with good documentation that deserve the attention of anyone planning to use their micro seriously for musical composition, but who doesn't want to spend a fortune.

● THE MUSIC SYSTEM/ ADVANCED MUSIC SYSTEM

Rainbird

TMS	
Amstrad	£15.95dk
C64/128	£14.95dk
AMS	
Amstrad CPC	£19.95dk
C64/128	£39.95dk

The Music System and the *Advanced Music System* were developed by System for Island Logic and later transferred to Rainbird. Versions have been made available for the BBC, C64, and Amstrad CPC micros, and the programs (the AMS in particular) are among the most powerful it's possible to imagine for these micros.

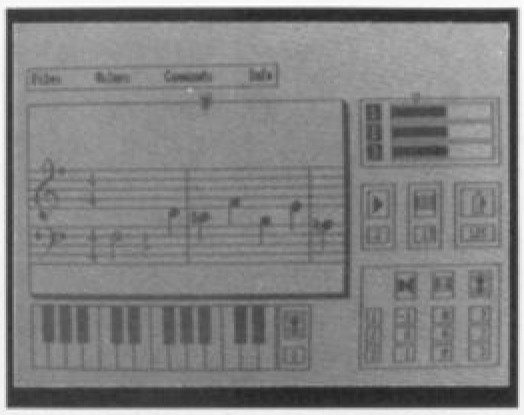
All versions use a sophisticated icon system, with the AMS versions having added MIDI facilities in some cases, printout options using a wide variety of printers, and linker sections which allow you to string together composition to create lengthier works.

The Editor/keyboard module does most of the work, allowing you to play 'Live' from the micro keyboard or to record performances. A double music stave is displayed and pull-down menus allow you to choose voices, while a metronome click is available for you to time your playing.

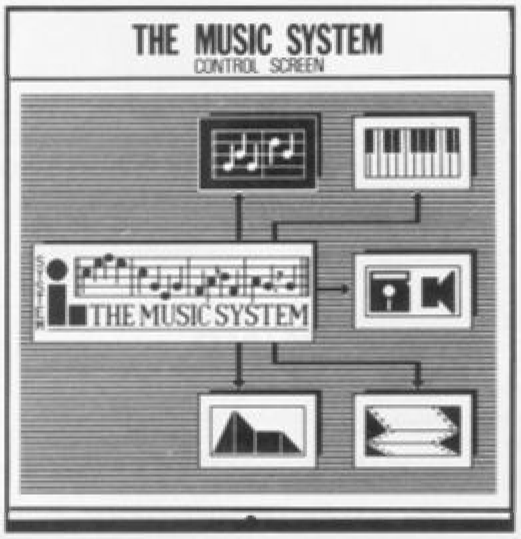
It's also possible to place notes on the stave using the cursor keys, and other notation such as ties, volume controls, and sharps/flats can be added.

Sound parameters can also be saved and the sound editing section includes software-based LFO's (Low Frequency Oscillators) for special effects and other facilities not normally found on the micro in question.

An opening page of icons allows you to select the major functions – sound creation, composition, editing, printing, or disk operation – and MIDI/Linking facilities on the AMS versions.



Rainbird's Music System running on the Amstrad CPC. Great fun, easy to use, and some powerful features. One annoyance, however, is that you can only see the score for one voice at a time while editing (although all three appear during playback).



The Music System's control screen – choosing an icon using the spacebar puts you into the appropriate area of the program.

The only problem with the package is that it can't be joystick-driven, which would have made more sense of the icon-based screens. But overall the TMS/AMS packages represent very good value for money and should be thoroughly investigated.

● OLIVER'S MUSIC BOX/MUSIC COMPOSER

Cosmic Pop, PO Box 475,
London, E4 9UD

Oliver's Music Box	
Spectrum 128	£9.99
Music Composer	
Spectrum 128	£11.99

Both these packages are intended to cope with 'music inputs and processing' and have a few features which their creators claim are unique. Both use conventional music staves but can cope with tied notes (notes joined together with a line which indicates that their values are to be added together) even if they cross bar-lines. The Spectrum 128 can't be connected to a printer while it's in 128K operating mode, so there is no printing facility on the *Music Composer*, but otherwise the two packages are pretty similar.

Music Composer does allow you to use the Spectrum's noise generator which is not normally accessible from 128K BASIC, and thus lets you create drum sounds as well as musical notes; the nature of the drum sound depends on the musical pitch and envelope you choose, and the tied notes are another effect inaccessible from the Spectrum's sound chip.

Oliver's Music is a simpler version of the same package for a 48K machine. The difference is that it allows you to print out your music, entering notes from the keyboard in more or less the same way. Whether printing is of any interest to you depends on what applications you'll find for your music.

In the Final Check mode, *Music Box* fills up the empty staves a note at a time, which is a good way of spotting mistakes in your programming. 5600 note capacity and 15 demo tunes make this one pretty good value for money too.

Sound Expander
COMMODORE MUSIC MAKER
COMMODORE MUSIC MAKER
Sound Sampler
Commodore Music Maker 128
Music Keyboard
Sound Studio
Beatles

If you want to 'sing something simple', you could try the Commodore Music Maker, which gives you a mini plastic keyboard to fit over the top of your 64, together with software that enables you to make easy use of the computer's sound chip. There are a number of add-on packages and you can also get a system designed to fit over the Commodore 128 (which the 64 version won't work with, due to the different design of the keyboard). Fun for the kids, but don't expect much in the way of sophistication unless you go for the Sound Expander (see elsewhere). Prices vary – shop around for best deal.

EMU

Gremlin Graphics
Amstrad £14.95cs £19.95dk

The *Electronic Music Utility* comes on tape and rejects icon operation in favour of clear, English labelling. The opening menu offers Env, Ent, Voice, Music, Save/Load Data, and Save RSX; the examples and help notes are on the B-side of the cassette.

Loading a demo requires a lot of moving about on the Load page and the main menu page, although the music display (in three-part harmony on a conventional music stave) is quite impressive when you eventually do come to it. Press Copy to make the music play and you'll hear a reasonably complex, slow ballad picked out in three stringy voices.

The screen display allows you to mute voices, set tempo, count notes remaining, set key, time signature and clef and choose new note and rest values to insert, and also shows you what note is playing or being programmed at any particular time on a miniature display of a one-octave keyboard. Notes are inserted one at a time using the Edit functions, or 'live' from the top two rows of micro keys used as a basic piano keyboard. The software will record your 'performance' and notate it on the screen - quite an achievement.

You can tie notes together, enter all sorts of score markings, and change the sounds used with the Env page and the Ent page. The latter defines envelope repeats. The former is a comprehensive display (within the limitation of the Amstrad's sound chip) of the time, volume, and timbre of a note, and gives as much control as you could reasonably expect over the sounds available. You can vary the overall volume during a piece of music and save a piece normally or in RSX (Resident System Extension) form for use in a BASIC or machine code program.

The handbook has a comprehensive list of keystrokes for programming plus a useful summary of the Block Copy function which allows you to reproduce any section of any voice as many times as you like. Overall, EMU seems powerful - but a bit fiddly!

Sound Expander

Commodore's Sound Expander cartridge. There's also a Sampler cartridge available, for those who want to steal a few 'live' sounds for use in their compositions.

FM SOUND EXPANDER

Commodore
Prices vary – shop around.

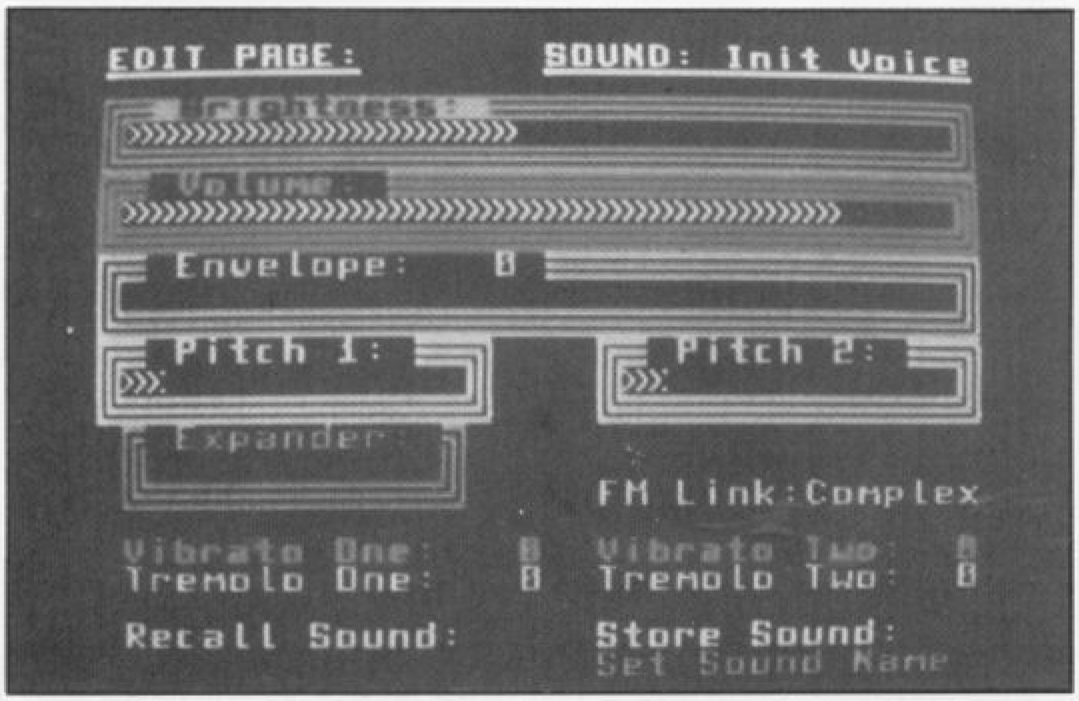
A vastly popular FM synth add-on, joined after some time by an Editor/Composer package. This allows you to compose polyphonic music, edit it, and to create new sounds to play it with.

The Composer section opens with a double music stave which allows you to choose a key signature, tempo, voice to be used, and so on. Notes are then programmed using the computer's keyboard or the Commodore music keyboard; you can enter one part at a time, and edit notes, copy blocks, and so on.

For MIDI freaks, the FM/MIDI page assigns each of the eight FM voices plus percussion to a MIDI channel and decides whether you want to clock the music internally or externally (say, from a MIDI drum machine). There's a new set of 64 internal FM voices which are far superior to the original set, and you can save and load music and voices to disk.

The voice editing software is separate on the disk, and the Set-up facility allows you to choose an upper and lower sound, split point, transposition, percussion on/off and MIDI on/off. After that stage you go on to the Edit page proper, which has bar graph displays for Brightness, Envelope, Pitch 1 and 2, Vibrato 1 and 2, Tremolo, and other parameters.

The Drum Machine section allows you to create kits from a selection of sounds and write patterns on a graphic display of a single bar. There's also a rather wonderful Fruit Machine section, which matches up sounds at random and gives you the opportunity to edit them into something really useful.


EDIT PAGE: SOUND: Init Voice
Brightness:
Volume:
Envelope: 0
Pitch 1:
Pitch 2:
Expander:
FM Link:Complex
Vibrato One: 0 Vibrato Two: 0
Tremolo One: 0 Tremolo Two: 0
Recall Sound: Store Sound:
Set Sound Name

Commodore's FM Sound Editor – this is the edit section, allowing you to define the characteristics of your sound – which on this package could be something quite special.

K-MINSTREL

Kuma Computers Ltd
Atari ST £29.95dk

K-Minstrel takes full advantage of the ST's sound chip, built-in MIDI and great operating speed, efficiency, and memory capacity. Three channels of composition and playback are on offer on the computer, together with 4, 8, 12, or 16 channels of playback via MIDI.

If *K-Minstrel* is replaying four channels of sound it can store 3200 chords, enough for a very lengthy composition. Slurs, triplets, accelerandos, and crescendos can be programmed, but *K-Minstrel* only offers very simple editing of the built-in sounds.

The package consists of a single disk and a slim booklet which describes the system as a 'musical display editor'. The basic display is a double musical stave and the pull-down options are Desk, Music (Play, New, Load, Save, Quit), Sequence (Play, Start, End, Copy, Delete, Move, Merge, and Save), Chord (Play, Delete, Insert, Mark), Select (Channel, Volume, Tempo, Attack, Decay, Sustain) and Options (Change Key, Change

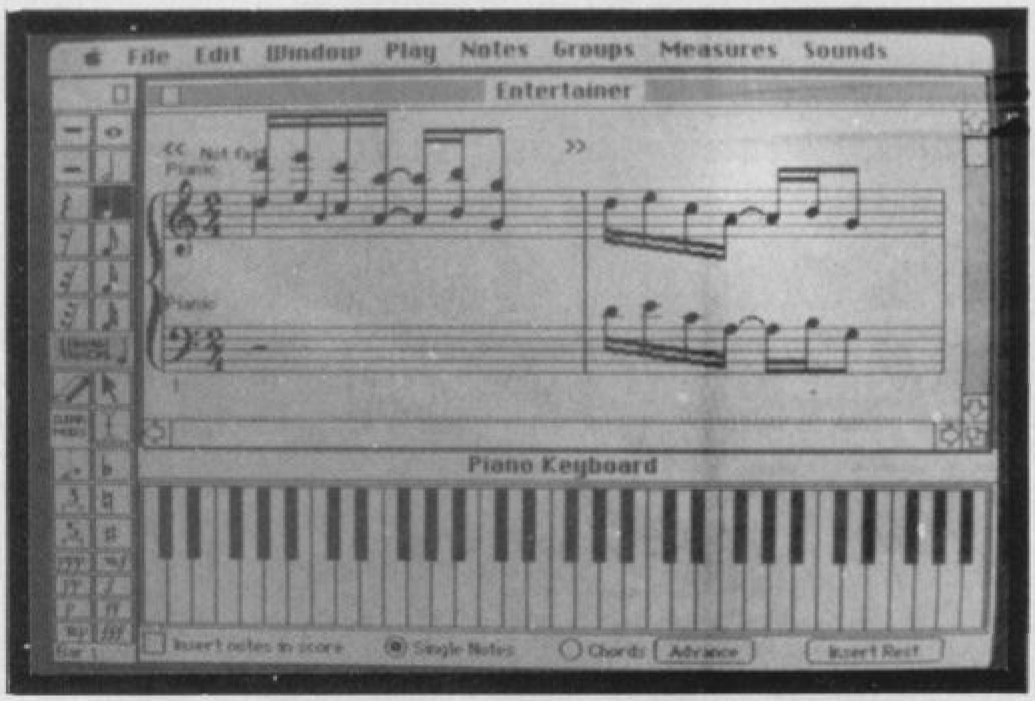
Name,Transpose, Metronome, Print Pages). *K-Minstrel* operates in medium resolution and produces rather tall, skinny characters. But the display's very clear and the bottom of the screen gives a choice of note and rest lengths and tempo select. Notes of the desired length are inserted into a piece using the mouse,.

A good selection of demo pieces (Handel, The Entertainer, Land of Hope and Glory etc.) show you how far the package can go, so you can start off by editing these to see the effects of various changes. Each channel is colour-coded and you simply select which channel number you wish to edit before beginning. The Select page gives a limited amount of control over the sounds used, altering Volume, Attack, Decay, and Sustain, and you can enter either single notes or whole chords.

Length of composition available depends on the number of channels used, but if it comes to more than one page, the page number reached is indicated as the composition plays (although the display doesn't actually scroll). You can load a sequence from disk and insert it after a section you've already completed, copy and merge patterns, enter a title for the finished composition, select a new key signature, and produce a metronome click if desired.

You can print out on an Epson or similar printer but will have to mark in tempo changes and a lot of the musical terms yourself. Triplets are printed accurately though.

K-Minstrel is a useful compositional system for basic work, although it won't teach you to compose, as such. But it does provide good value for money for the existing ST user who'd like to see whether his interest in music justifies moving on to a more professional and more expensive package. ●



Activision's Music Studio, available for the ST and the Amiga, is a pleasing compromise between the total complexity of EA's Deluxe Music Construction Set and other, simpler packages. Good scoring features, some excellent demonstration tunes, and a wide range of instruments. There are facilities for voice editing as well as composing and the package provides a good balance between ease of use and power. Recommended – it'll set you back £24.99 for both the ST and Amiga versions.

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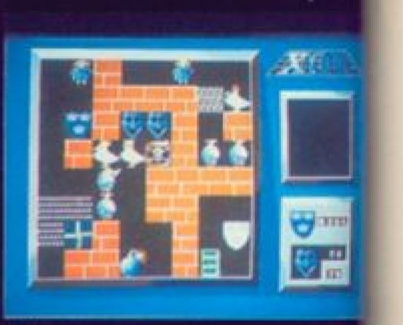

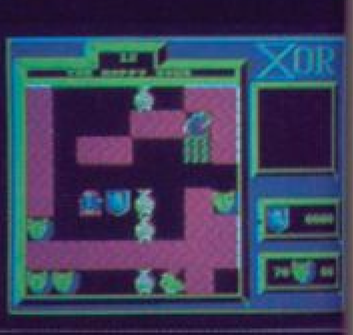

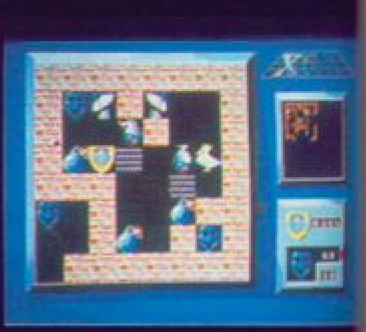

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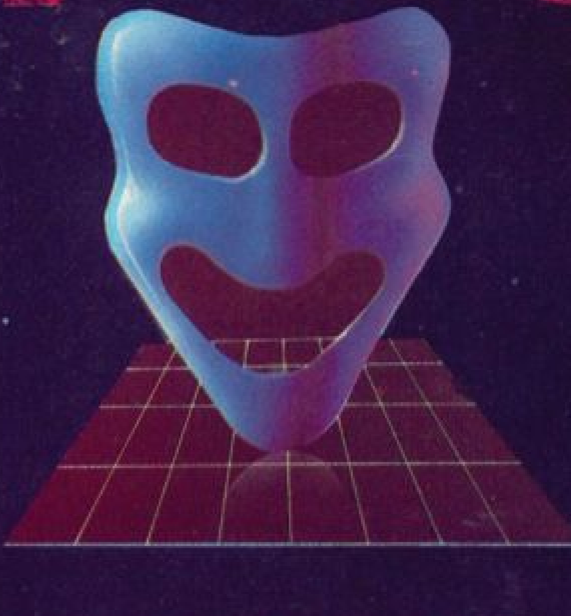

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ACE LETTERS

Well, it only takes a wee bribe and before you can say 'Advanced Computer Entertainment' the letters are flooding in – and some very meaty ones, too. Letter of the Month prize goes to K.B.Smith of Leeds for his sensible and forthright views on the Sex and Censorship controversy. K.B. wins Jinxter for his ST.

The other two winners are arcade engineer Ian Wooller for his peek behind the coin-op rights, and Deano Schofield for his useful fuse tips.

If you want to give yourself the chance of winning a prize at the same time as getting a load off your mind, write to

ACE LETTERS, 4 QUEEN STREET,
BATH, BA1 1EJ

Off his chest

I am a games freak. I love fast moving zapping games. As I own an Amiga 500 one would think I have the right machine to keep me happy, (wrong). Well I do have the right machine really – but the wrong software.

All us Amiga owners get is ported down versions of ST games (if we're lucky). Now don't get me wrong; the ST is a great machine and a great price too. I wish to buy one as soon as I can afford one, but to make a point 'when you buy a Rolls Royce you expect a Rolls Royce drive not a Mini drive.' So I think us Amiga owners are not getting software to match the incredible features that the Amiga has to offer.

Take the game *Barbarian*; the graphics are great and so they should be on the Amiga but the game play is to my mind no better than some of the Spectrum or CBM 64 games. Plus, where are all the great looking screens which are on the box which the game comes in? I've been through the whole game (in a cheat mode) and have not found any of them.

So if that's the best they can do on the Amiga then I think I would like to buy my old Spectrum back. So come on all you software houses – let's see some games which are really fit to be played on the Amiga. That's better now, I've got that off my chest.

M D Tunbridge
Yeovil

You've got a point – many Amiga games are simply ported over from

Sex, violence, *et al*

LETTER OF THE MONTH

I am writing to express my thoughts on sex, violence, Maria Whittaker, et al, following the running debate in your pages, and those of other magazines. (Not that I read other magazines, of course). I personally find that many of the adverts for computer games offensive, for all sorts of different reasons. Let's take the Maria Whittaker controversy first.

In the current (February) issue of ACE, MB of Dewsbury points out that the man in the ad is also scantily clad, and asks if the fact that no-one complains about that means that it is all right to see sexy men, but not right to see sexy women. His assumption is that the ad is accused of being degrading to women because it exploits female sexuality. This greatly over-simplifies the case. We all accept that, on the whole, men find women attractive, and vice versa, and that simple fact has been exploited throughout the whole of history and particularly advertising history.

The reason the *Barbarian* ad – amongst many others – degrades women more than men is to do with power: both male and female are depicted as being nothing more than a set of physical attributes, but the male is clearly stronger, dominant, and therefore – doesn't it make you feel good, chaps? – superior. Ask yourself who the ad is aimed at – or should we believe that Palace Software expect women to buy *Barbarian* in droves, in order to drool over a muscle-bound moron sexily cutting people's heads off? I think it more likely that violence is being sold to men, rather that sex to women.

MB makes a rather poor attempt to disguise his chauvinism by accusing Mr Panayi (letters, issue 3) of being condescending to women by speaking for them; I imagine Mr Panayi would claim only to be speaking for himself, but MB ploughs on to express the thoughts of "most women I know", and to claim that "women are far more cunning than men" – a pejorative phrase if ever I heard one. Careful, Mr B, your misogyny is showing!

In the sickening world of many of today's computer games, the only virues or qualities worth having are rippling muscles, macho aggression, and a bigger weapon than anyone else, and it is this portrayal of maleness that is degrading to men. All problems and confilicts are to be resoled by violence and killing, and this is always justifiable because, you see, we're the good guys and they are the evil ones.

O.K, I know that this is a convention for the sake of allowing conflict in games scenarios, but it reinforces the idea that any act is permissible as long as it is done for the right reasons; the IRA think they have the right reasons; Hitler thought he had the right reasons; we all think we have the right reasons, but civilisation depends on us being prepared to submit those reasons to the judgement of others. *Rambo*, *Barbarian*, *Deathwish*, *Renegade*, etc etc, gradually create a climate of opinion that makes it acceptable to refuse to do so – if you have 'right' on your side. Yes, they are just games, (or films, or books, or TV programmes, or videos), but gradually they bring about a numbing of the imagination and an adjustment of social mores; they should all be burned, and then their perpetrators should be disembowelled with a chain-saw, and then – (I *know* I'm right) – we could impose censorship and the death penalty for anyone publishing anything a bit rude, and then...

Seriously, software companies, a bit more restraint please?

K. B. Smith
Leeds

the ST with no enhancements. the ST with no enhancements. Unfortunately, the situation is unlikely to change much unless the Amiga starts selling in larger numbers. At the moment there's not much of an incentive for software houses to do anything special for the Amiga; there are more STs around so they write – in the first instance – for that.

Terse

I would like to point out a view I hold:- Mark Hodsman – You're a jerk.

Chris Wallis
Portsmouth

Would Mark like to comment on this pithy judgement?

Listings

I agree that typing in listings is a waste of time and energy. However, I believe that many people would be interested in articles on programming *techniques*. For example, how to implement ray tracing, inbetweening, fast 3D graphics etc. The algorithms required could be presented in 'pseudocode', which could make them applicable to all machines and languages available.

Also a few articles on the latest 'gee wiz' hardware wouldn't come amiss; most technophiles lap up features on transputers and RISC machines. (Yes, I bought issue 3 – Games of the Future was the best article I'd seen in ages. More please.)

John McDonnell
Warrington

We're looking very seriously at introducing something along the lines you suggest, although it certainly won't be a great wadge of listings. Watch this space.

More TOS Troubles

Just before Christmas I bought an Atari ST FM and, just like G.C Noakes, I discovered that my ST has TOS version 1.09 which would not run some software. I have compiled a list of titles which will or will not run with TOS version 1.09.

Do Work

Barbarian (Psygnosis), Defender of the Crown
Blue War, Flight Simulator 2
Tenth Frame, Trailblazer
Hardball, Solomon's Key
Xevious, Star Trek (1.09 version)
3D Galax, King's Quest I,II,and III
StargIider, Star Raiders

Don't Work

World Games
Golden Path, Hollywood Poker
Arkanoid, Star Trek(1.08 version)
Road Runner, Karate Kid 2
Gauntlet

I was not very pleased to discover that there are some major titles that do not work, especially at £20-25 each. Please print this list or letter to save new ST owners precious time and money.

Kevin Sander
Welwyn Garden City

Having bought your magazine. I flicked through your letters section and saw the letter named 'TOS Troubles'. I read it quickly and realised that I have the same problem. I purchased *Bubble Ghost* for my Atari 520 ST FM from Silica Shop and when I booted it up my ST just printed 'disk not responding' error. After Christmas we went back to Silica Shop in Kent and when they tried it on a 1040

8 Bits v. 16 Bits

I would like to join Grant Punchard (Feb 1988) in saying that although I would dearly like to own an Atari or Amiga there is no way I could afford either! I have only owned a computer for just over year. When I was trying to decide upon one I read that although cheap the Spectrum had a rather slow and odd form of basic. After much debating I decided upon an Amstrad 464 (as I could not afford a 6128).

The main consideration was that I needed a monitor and with the 464 I only required a plug. Since then I have upgraded to a 6128. The Amstrad 6128 with a colour monitor cost me £399.00.

PRIZE LETTER

How much would an Amiga cost – with monitor? £600 – £700 –£800? There is no way that I am in a position to pay that for a home computer and then be expected to pay about £25 for a game.

I therefore feel that this view that within the next year 16-bit computers will overhaul 8-bit is a bit premature (unless my Saviour Alan Sugar comes up with a cheaper package as rumoured!) as there must be many juniors who are probably in a worse financial position to myself.

It would also be nice if the big name software houses sometimes paid more attention to conversions. The most disappointing games I have bought are *World Class Leaderboard* and *1942*. *World Class Leaderbord* would be a superb game without the bug. I have now owned the cassette and disk versions which both had a bug on certain parts of the putting greeens. I am awaiting a reply from the mãnufacturers about this.

Now – how about some praise? Firstly to Incentive for the magnificent game *Driller*. Secondly – Micropose and Amstrad for customer service and courtesy. Both have been very helpful to me over the past year. Thirdly, yourselves. I enjoy the News and reviews sections. The overall magazine I like but I am getting a bit tired of the '8 bits dead – 16 bits rule' attitude by some of your team.

Stephen Stewart
Southampton

We don't believe that 8-bit machines are dead yet, and we certainly aren't going to stop supporting them. But we are excited by the possibilites of 16-bit machines, and we think most people interested in computer entertainment are as well.

Smouldering

I was reading issue five one Sunday night when I saw a letter. By Neil Wilson, Neil 'Racist' Wilson. Allow me to assess what Neil has said. He wants ACE to cover the Amiga more, drop 8-bit computers (especially Amstrads), print larger photos of Amiga screenshots and smaller pictures of 8-bit games, and as a finale, get rid of the play-by-mail section.

I haven't ever owned an Amstrad, nor have I played a Play-by-Mail. I am slowly saving for an Amiga, and I've never heard of Alan Sugar (who he apparently hates). But Neil Wilson bugged me more than any other person who's written to a mag.

I bought ACE because it was a non-discrimanatory computer magazine covering all machines equally. Even though the Amiga market is relatively tiny, and I detest Spectrums. Neil, however, would like you to abandon the 8-bit field, (by far the biggest market) kill someone and abandon the PBM section which appears to me to be an interesting hobby.

And what is wrong with Amstrads? They have gorgeous graphics compared to my C64 and a half decent sound chip. Lots of games are released for them but he seems to think of them as Orics! Anyway, I'm rambling on now so I'll shut up and smoulder in peace.

Ian Morgan
Grimsby

Dipstick

Neil Wilson must surely get 1st prize in the national dipstick competition. It seems to me he wants everything his own way and stuff anyone else. Well, his attitude stinks. He wants ACE to cover less on Amstrads, yet he goes on to moan about how badly Alan Sugar has treated Amstrad owners. Surely, a contradiction in terms. As for his point about the Spectrum, perhaps he should remember that Alan Sugar could easily have scrapped them altogether. Also, for the life of me, I can't see his point about 464 owners. They still have a strong software base, due to the fact that the 6128 remained compatible. Now, perhaps Neil should also consider the fact that 8-bit computers are still, by far, the majority and many people aren't bothered about buying a 16 bit and paying £25+ for a piece of computer software. Overall, the letter gives the impression that Neil has bought a 16 bit Amiga and is scared stiff that it may quickly be superceded by another computer. Perhaps his apparent hate of Alan Sugar has something to do with the much rumoured new Amstrad 16 bit computer. To prove that my letter is due to my anger of the **** that Neil Wilson writes, and not just to win a prize, I have not enclosed my full address, so you can't give me one, even if you wanted to.

Mark Spencer
Sheffield

Shame about that address, because we might just have given you a prize...But what about Neil Wilson? Is he going to take this abuse lying down? Will he riposte? Watch this space...

STF it loaded perfectly. The salesman then asked,
"When did you buy the ST?"
My dad replied,
"Just before Christmas"
"You probably got the newer TOS chip in. "replied the salesman. So I changed it for *Wizball*.

Christopher Heathcote
Chelmsford

We hope that Kevin Sanders' list helps everyone with their TOS troubles.

● Arcade Rip Off

I've known for a long time that arcades change the difficulty level and lower bonus adders on certain machines. An example is the arcade near my college. It has a *World Cup* machine and it costs 20p for one minute extra time, in the two player mode. In the arcades in the West End you can get five to ten minutes for extra time. The same goes for *Gauntlet* ; you may get 100 health points for 10p. The smaller arcades can't afford to drop prices and difficulty levels while the bigger arcades can. The arcades have the choice to change these different levels so the best solution if you find a 'greedy' arcade is to shop around for a better arcade otherwise you have no choice.

Leigh Hammond
Barnet

● Music, maestro!

Clap, clap, clap for all the info on musical instruments and their performances. Since I have read the music pages, I seem to have been inspired to write my own material and in doing so might have put some good stuff together, so I'm going to get a recording done very shortly. I will forward a copy of the tape very soon.

D. Smith
Galashiels

We'll look forward to hearing it. Could you also send a good hi-fi system...

Piracy!!

All computer magazines have in the past had write in discussions about this. I am what can only be called a reluctant pirate? You see, the only reason I have pirate games, utilities etc is because of the availability of the stuff so long before their commercial release.

When I first bought my Amiga I decided that I would not take pirated stuff but why the hell should I wait for the software houses to decide that it's time to release their stuff months after it is finished and out on the pirate circuits? Let me give you a few examples:-

Bear in mind [illegible] I am writing this letter on 8th Jan 88 (not at the time you read it)

Ferrari Formula 1, release just put back again by Electronic Arts, all the shops waiting desperately for it...I've had it since Dec 29th (now take into account the Christmas post!!)

Bee Gee Air Rally, the shops have never heard of it..(mid October)

Crazy Cars, Just given as a hot new release. ..(early Sept)

Arkanoid (Jan 6th)
Eagles Nest (mid Dec)
Blackjack Academy (October)
Phalanx II (October)
Way of the Little Dragon (November)

The list is endless, so why? If these games are finished and the're available to pirates, then why not to people like me who want to BUY them but can't!? So we have to resort to piracy. Aren't the software companies asking for it?

I have been desperate to get hold of a certain game for weeks now. I have even phoned America to try to get hold of it from the distributors with no luck. I tell a pirate friend I have that I'v been after it and what happens? He gives it to me because he's had it for 6 weeks. This has got to be wrong.

Until software houses sort themselves out and make their stuff available for purchase they will get ripped off.

Some Answers Answered.. (these are my answers to some of the comments I think you will make).

You naughty boy, don't you know it's wrong..

Yes I do and I do genuinely wish that I could buy the software that I want, but I can't so until I can I will take pirate stuff (I mean, how long is it reasonable to wait)...to this I'm sure you ill say "Until it's released"..but it's human nature isn't it, you would have to be a monk not to take some stuff on offer but unavailable to the public.

Be patient.

I have spent well over a thousand pounds on my A500, 1 meg upgrade, monitor, external drive, and printer. This is a hell of a lot more than I can afford, and I will be paying it off for a long time yet, so do you think I can sit back patiently waiting for a decent game to be released, and saying to the pirates I know "Oooh *Defender of the Crown IV*, it sounds very good but I'm quite happy playing *Hollywood Strip Poker* thank you very much."

A final note to software houses. I know a lot of pirates and a lot of the people who crack (de-protect for the layman) your programs (I bet you wish you did?) and there is only one type of protection that absolutely none of them will touch, you can extend your disk to 182 track if you like but it will still be cracked (*Backlash* was particularly well protected ..and it only took 5 hours to crack) but no one does *The Pawn, Jinxter, Guild of Thieves* etc, or Infocom games because of the brilliant packaging...You know "please open the envelope provided and read the letter" or "please type in word x on page y etc,

Reluctant pirate

It's a pretty sordid picture you paint. But I think there are certain confusions. For a start, you assume that any pirated copy is a complete copy, and that software houses are deliberately holding back games. Neither of these assumptions is true. If a game is finished to the extent that the software house is satisfied with it, then 9 times out of 10 all they want to do is get it out on the market as quickly as possible. I suspect you're trying to excuse your own piracy by blaming the 'slowness' of software houses in releasing games. What, for instance, has the amount of money you spent on your system got to do with the matter? You knew very well what a game was going to cost when you bought your hardware.

● Is 'Doley' a thief?

In reply to A. Doley's letter, I'd just like to let him know what a plonker he is. Does he not understand that by pirating software he is increasing the price of the software he doesn't want to buy? In a way he is a thief. He doesn't want to pay for something he can get for nothing. He is spoiling the software industry as we know it. If all of us suddenly started pirating games where would the software industry be? One person buys the software and everyone else copies. Imagine the follow-up to *Defender of the Crown* selling one copy – collapse of the software industry. I'm sure that 'Doley' would be feeling sorry for himself then.

Ian Cracknell
Whitstable

● Where are the programmers?

I feel I must comment on the style of magazines – including yours – on today's market. Firstly, let me say that I am not a newcomer to the computer world and I have been buying (and reading!) computer magazines for about five years. Recently, I went through a few of my old magazines from 1983/84 and something struck me about the style of the news, reviews,and articles contained in the issues from this era. The first thing I noticed was how much more interesting they were compared to today's equivalents, but there was one thing that stood out more than any other and that was news and articles concerning programmers. Today in most magazine news sections all that seems to be topical is what actual companies are doing.

I find this very strange as programmers are the second most important ingredient in the industry (the first being the game-playing public of course). The same thing happens in reviews; 'x company has surpassed itself with the release of y product' and no mention of the programmer who after all wrote the thing! A recent example of this kind of 'forgetfulness' occurred in your sister magazine Amstrad Action. In the review of *Driller* the reviewer fell over himself to tell us that a few of the sound 'spot effects' were created by someone who won a competition in a previous issue. Not a mention of the programmers who spent twelve months developing 'Freescape'.

Why has there been this movement away from the programmers? I for one would like to see more about programmers in the future.

Gareth Baker
North Humberside.

We do try to cover news of programmers, and we intend to do more in future issues. But things just aren't the same now as they were five years ago. In those days most games were written by individuals on their own, with possibly a little input from a graphics wiz and a musician. A lot of companies were one man

Funny fuses

I hope I may be of some assistance to Darren Moore who was having a bit of bother with his Speccy. There are two possible answers to his problem. The first is that he may have either a faulty double plug or have the wrong fuse in it. If this is the case then either buy a new one or replace the fuse with a 5 amp one.

The second reason is much more complicated. Darren may have an unstable circuit in his house so try your computer on different plugs around the house or if the problem persists you may have to consult an electrician. I do know how Darren feels as my own computer does not work Ocean, Imagine and US Gold games downstairs where our extension causes interference and even when I moved it upstairs these companies' games still would not work until I changed the 3 amp fuse in my double plug to a 5 amp one.

I hope a simple fuse change is all that is needed.

Deano Schofield
Tamworth

PRIZE LETTER

bands, where the programmer would also be sales manager, PR person, and so on. Now, on the other hand, we see a shrinking number of software houses, producing more and more software based on coin-ops, TV and film licenses, toys etc. There is no longer one individual programmer responsible for the whole thing from concept through design to coding; most games are the product of teams. There are still, of course, a few 'star' programmers around (David Braben, Costa Panayi, Andrew Braybrook et al*) but it would be boring in the extreme if we merely recycled the same faces every few weeks. So we'll cover programmers where and when it seems interesting to do so.*

● A better class of magazine

Asking at the newsagents about 'a better class and more adult' computer magazine I was recommended ACE, which I purchased. The quality printing-wise and the articles are very good. I have sent off for the last three back numbers.

It's nice to see a readable type black on white or even tinted page, and you don't resort to comics or startling horror posters.

We are both pensioners and own a Spectrum+ and the games we enjoy are *Scrabble, Chess, Boulderdash* and other puzzle games like *Think!*

R.E.Riches
Hemel Hempstead

Nice to hear we appeal to the more mature and discerning reader. The Brain Games article in this issue should be right up your street.

● Endgame despair

Am I alone in despairing at the endings in games? An awful lot seem to just wrap around back to the beginning or just give a brief textual message after completion. This sort of thing totally negates any satisfaction that a player might get from completing a game. Surely after completing a game we at least deserve a little tune, or even a graphic sequence?

Gregory Stone
Chesterfield

You are not alone, Greg. Several people around here have commented on the lamentable state of endings. There should be more than a measly 'Well done' when you've laboured to complete a game, and it's about time the software houses and game designers pulled their fingers out and did something.

● C64 ROM

While reading the letters page of issue 4 I noticed a plea for help by a C64 owner who was having big problems with *Gauntlet*. I work in a computer shop and have had this problem before and as such may be able to help him.

C64s, as you know, have been around for quite a while now and inevitably they have undergone some changes. One such change saw the re-design of the graphics ROM, and while not major there are still some differences between 'old' and 'new' C64s.

Should a game (in this case *Gauntlet*) which has been programmed upon a new style machine, refer to the ROM and find the wrong information there (because the machine running it has an old style ROM) then it will cause an error; if this error has not been taken in to account at the time of programming, then the game will crash.

As to what the unfortunate C64 user can do about it; he must go aong to his friendly Commodore repair agent who will replace the ROM (unfortunately the most expensive chip in the machine) and then he will be as right as rain to play all his games. Simple, eh?

Andrew R. Leighton
Accrington

You're right, of course. But most software is in fact written to run in the lower resolution, so you don't often get the benefit of the all those extra pixels.

In the arcades

As an amusement arcade engineer with 3 years experience in the trade, I would like to pass comment on some points of Craig Freeman's letter, Feb '88 issue 5.

Firstly game pricing. Most older games , e.g. *Star Wars, Hyper Sport, Wonderboy, Rygar* etc command a 10p price of play. Newer games such as *Double Dragon, Out Run , Pacmania* etc are 20p. Some games such as *Afterburner* and some of the sit down simulators will be more, but this is because some of these games are 3 to 4 times as expensive to purchase. As far as my experience goes, when newer machines come into the arcade, it is better that they are set up to be a challenge to the player which can be met, rather than being so difficult that they do not encourage the player to play again. If a game is too hard or too expensive people will not play it.

Secondly, skill levels. Most machines do have a menu of options which can be altered by the operator, so it is not the manufacturer's fault if a game is too hard, although I must admit some games are very difficult to set at a level which is suitable. I found this with *720* myself. Also Craig must remember that as a machine gets older, people will get better at it and sometimes this makes it necessary to alter the levels slightly. Most operators will try to give the best value for money. But if someone gets so good that they stay on the machine for hours on one 10p, there is not a lot they can do. For example in one arcade I cover there are about 4 lads who can stay on *Star Wars* from 10.30am to 10pm for 10p, also there are several who can do the same on *Gauntlet*. This does not even pay the electricity.

As you can understand these are my views and each operator will set his machines as he sees fit. taking all factors into account. So, Craig, I suggest that you put yourself in an operator's shoes; remember that if all videos were set up very hard they would not be played. If they are not played, they will not take any money. So I can't imagine anyone deliberately making their machines unplayable.

If anyone out there knows, I am trying to find out if anyone ever brought out a game for the CPC 464 called *QIX*. Originally it was an arcade game made by TAITEL. If anyone did, I would like to buy a copy.

Ian Wooller
Budleigh Salterton

An interesting insight in to what goes on behind the scenes. As far as Qix is oncerned, we think you're out of luck; there were several micro versions, but never one for the 464. Shame – it was a terrific game.

PRIZE LETTER

FREE STICK

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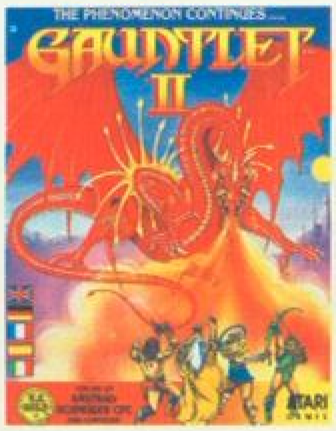
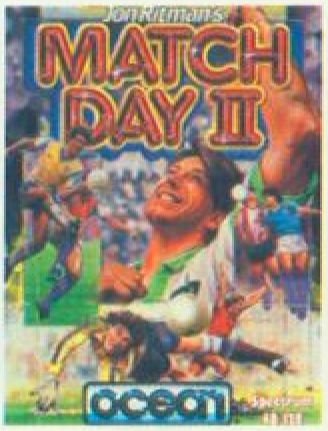
SEVEN
ocean





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Ocean

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Spectrum cass	8.99	**6.95**	A123SC
CBM 64 cass	9.99	**7.95**	A123CC
CBM 64 disk	11.99	**8.95**	A123CD
Amstrad cass	9.99	**7.95**	A123AC
Amstrad disk	14.99	**11.95**	A123AD
Atari ST disk*	19.99	**14.95**	A123ST

*ST version imminent

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Ocean

The Konami arcade game featuring sEven gruelling events.

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Spectrum cass	7.95	**6.25**	A131SC
CBM 64 cass	8.95	**6.95**	A131CC
CBM 64 disk	12.95	**10.95**	A131CD
Amstrad cass	8.95	**6.95**	A131AC
Amstrad disk	14.95	**11.95**	A131AD

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FREE!
KONAMI
COMBAT SCHOOL
ocean

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US Gold

A collection of five fantastic titles: Infiltrator, Leaderboard, Gauntlet, Ace of Aces and Winter Games. Hours and hours of entertainment.

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CBM 64 disk	14.99	**11.95**	A122CD
Amstrad cass	9.99	**7.95**	A122AC
Amstrad disk	19.99	**15.95**	A122AD

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Rainbird

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Arcana

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US Gold/Epyx

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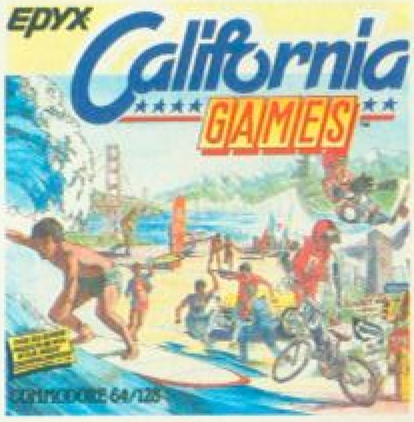
Spec+3 disk	12.99	**9.99**	A135SD
CBM 64 cass	9.99	**7.95**	A135CC
CBM 64 disk	11.99	**8.95**	A135CD
Amstrad cass	9.99	**7.95**	A135AC
Amstrad disk	14.99	**11.95**	A135AD



DEFLEKTOR

Gremlin/Vortex

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CBM 64 disk	14.99	**11.95**	A126CD
Amstrad cass	9.99	**7.95**	A126AC
Amstrad disk	14.99	**11.95**	A126AD
Atari ST disk*	19.99	**14.95**	A126ST

*ST version imminent

GAME SET and MATCH

Ocean

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CBM 64 cass	12.95	**9.95**	A120CC
CBM 64 disk	17.95	**13.95**	A120CD
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Ocean

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CBM 64 cass	9.95	**7.95**	A129CC
CBM 64 disk	14.95	**11.95**	A129CD
Amstrad cass	9.95	**7.95**	A129AC
Amstrad disk	14.95	**11.95**	A129AD

TRANTOR

US Gold

Use a flame-thrower to smash the power of the evil Nebithons. Spectacular graphics.

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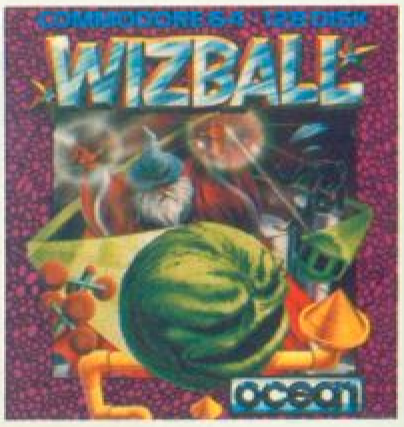
Spec+3 disk	12.99	**9.99**	A132SD
CBM 64 cass	9.99	**7.95**	A132CC
CBM 64 disk	11.99	**8.95**	A132CD
Amstrad cass	9.99	**7.95**	A132AC
Amstrad disk	14.99	**11.95**	A132AD
Atari ST disk	19.99	**14.95**	A132ST



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CBM 64 cass	9.99	**7.95**	A124CC
CBM 64 disk	11.99	**8.95**	A124CD
Amstrad cass	9.99	**7.95**	A124AC
Amstrad disk	14.99	**11.95**	A124AD

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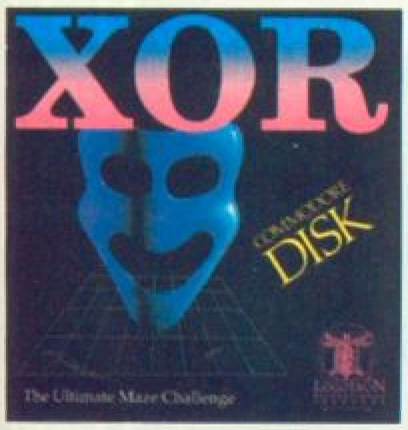

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CBM 64 cass	9.99	**7.95**	A128CC
CBM 64 disk	11.99	**8.95**	A128CD
Amstrad cass	9.99	**7.95**	A128AC
Amstrad disk	14.99	**11.95**	A128AD
Atari ST disk*	19.99	**14.95**	A128ST

*ST version imminent

XOR

Logotron

Ingenious maze game, packed with mind-bending puzzles. Original and very compulsive. Ace Rated 927.

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Spectrum cass	7.95	**6.25**	A119SC
CBM 64 cass	9.95	**7.95**	A119CC
CBM 64 disk	12.95	**10.95**	A119CD
Amstrad cass	9.95	**7.95**	A119AC
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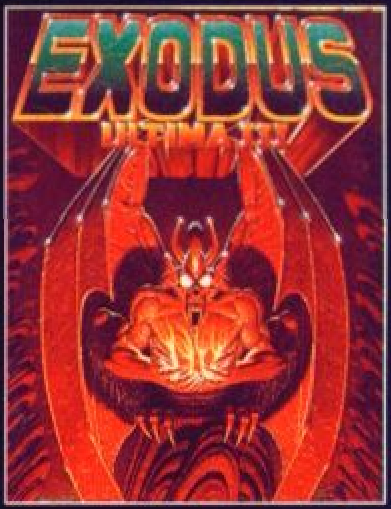
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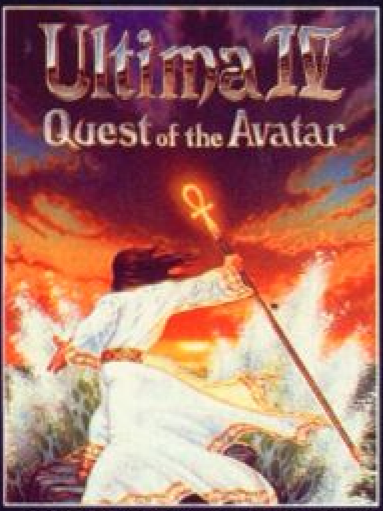
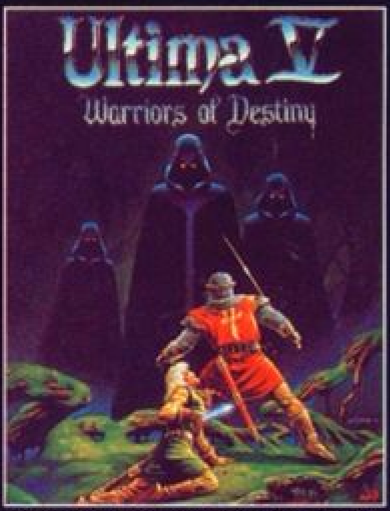

Ultima IV
Quest of the Avatar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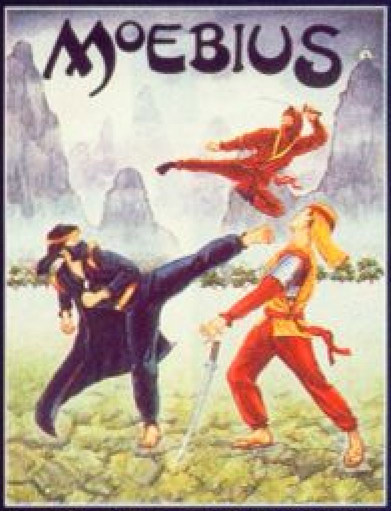

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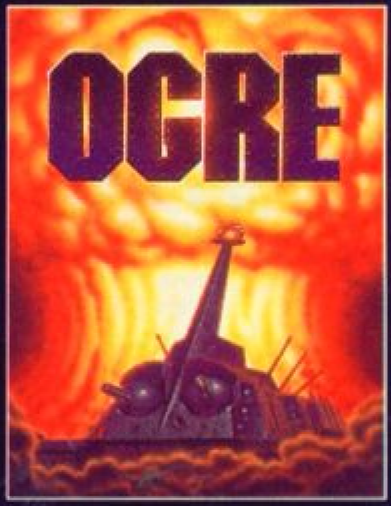

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The Pilgrim checks out Infocomics, budget adventures, and news of the new Atari ST adventure generator from Incentive. And if that's not enough for you, there's also the first of a two-part look at role-playing games, SHADES Diary, Pat's Patch, Players' Guide....Get to it!

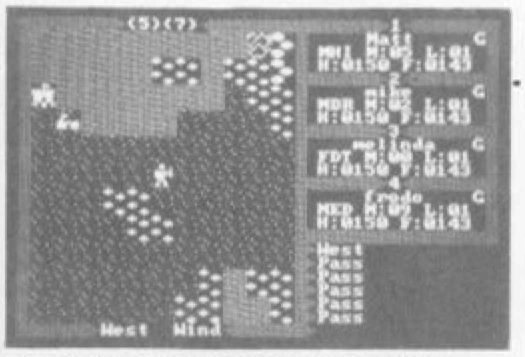
PILGRIM

Pass the Persona, Darling...

First of a two-part Buyers' Guide to Role Playing Games

Fantasy games took a big step forward with the creation of *Dungeons and Dragons*. It remains the role-playing game par excellence, so before we look at its computerised offspring, perhaps we ought to get clear exactly what we mean by a role-playing game, or rather what we mean by a good one.

In *Dungeons and Dragons* a group of human players (occasionally they may be sub-human, but don't call them that to their faces) get together and elect a Dungeon Master. Following the rules of the game, the Dungeon Master constructs a 'gameworld' (in effect a massive maze, or 'dungeon') and fills it with treasure, monsters, and other game characters. This is done without revealing the details of the map to the rest of the group.



The Ultima Series – this is *Ultima IV*, typical of the programs produced in this series produced by Origin Systems and marketed in the UK by Microprose. The games all feature large maps, using character-block graphics, and complex trading, magic using, fighting, and interaction routines. The latest in the series, *Ultima V*, looks especially interesting and should be available for review in the final part of our series.

The other players then form a 'party'. Each player names and creates a game character or persona, giving their character certain qualities of character, strength, and morality (attributes). Personae are also given a small amount of money to start with, and then they all band together and sally forth into the dungeon.

During play, the party will advance through the various locations, encountering obstacles, logic problems, and objects. Their success or failure is determined by the Dungeon Master, who oversees their progress and administers justice according to the very precise rules of the game. Combat is frequent and depends on the fall of dice, in conjunction with the various combatants' attributes. Dice falls, interpreted in conjunction with numerous dice tables, also determine success or failure in other ventures – unlocking doors, casting spells, and so on.

ADDICTION

What makes *Dungeons and Dragons* so successful? Why do perfectly sane people spend hours, days, weeks, sometimes months locked away together, often caught up in a single game, with apparently nothing but a large map and a load of dice?

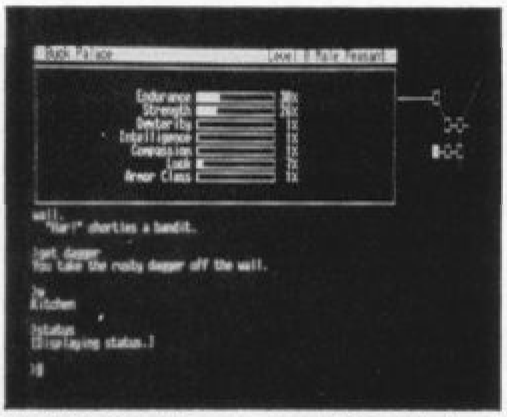
The answer is simple – the power of the imagination. As gameplay progresses, you find yourself identifying more and more with your game persona. Some D'n'D players are even rumoured to have forgotten their real names. Instead they answer to barbaric titles, such as Meatballs the Wizard, Slagbum the Dwarf, or Delphinia the Witch. Yes, the mind does funny things... and none funnier than the tricks it plays during a prolonged D'n'D session.

If the idea of magical fantasy turns you off, then you should know that there are many other scenarios available, including science fiction, ancient history and so on. And of course you can create your own scenarios, using the standard rules as a foundation.

PERSONAE

Almost all role-playing games divide personae into different categories, and usually your category is partly determined by your attributes. Warriors, for example, need a high dice throw for their initial strength allocation, wizards would have to score highly on intelligence. Character types also include race variations and even in some games moral 'alignment' (are you good, bad, or chaotic?).

Your character's attributes, therefore, determine gameplay to a significant extent, placing limitations and bestowing privileges upon your character. Most important of all, however, is the ability for a character to change during a game. Personae grow in power and experience as they overcome obstacles, allowing the player to triumph over greater foes, and giving him/her a wider choice of alternative actions in a given situation – more spells, for example, or better



```
"Har!" chortles a bandit.

>get dagger
You take the rusty dagger off the wall.

>w
Kitchen

>status
[Displaying status.]
```

Beyond Zork – an unusual program, concentrating on text entry and good location descriptions, but with the added spice of character development. Recently reviewed in ACE, but we'll be taking a more in-depth view of it next month.

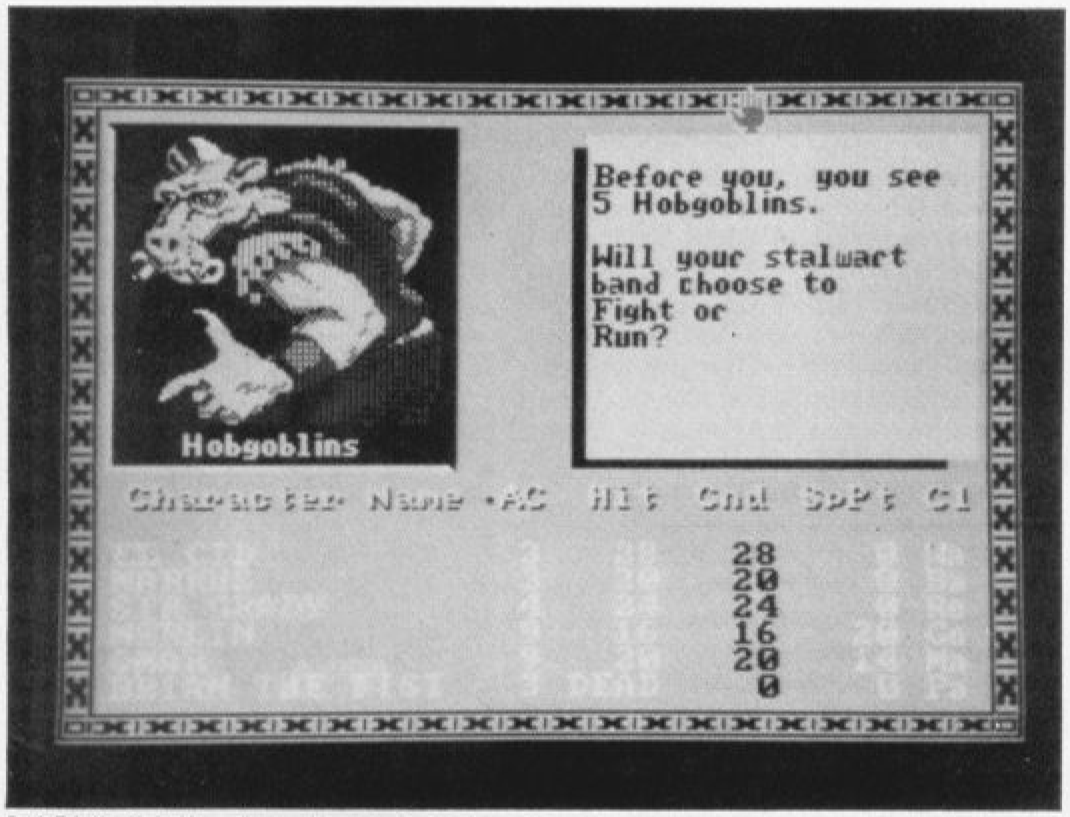
lock-picking abilities. Again, this character development can contribute largely to the addictive nature of the game and increase the feeling of identification that a player feels with his/her persona.

COMPUTERISATION

Ever since computer adventures hit the scene, people have been dreaming of the ideal D'n'D implementation on a micro. The basic concepts have found their way into a number of games, from PSS' disappointing *Swords'n'Sorcery* to Infocom's recent release, *Beyond Zork*. The official version of *Dungeons and Dragons* is expected to launch towards the end of this year, but meanwhile, what's holding things back?

First and foremost, it's been the cassette-based market here in the UK. You simply can't program a large game, complete with maps, text, character interaction routines, parser, and location graphics on a machine limited to 64K, or even 128K. What you need is either a 512K machine or, even better, a good standard disk system that can load in graphics and text when required.

However, a few games have managed to distil the role-playing concept into sufficiently small space to make them work for 8-bit machines. We'll be looking at these over the next couple of issues, concentrating on five main releases: *The Bards Tale* (and its successor, *Bards Tale 2*); the *Ultima* series; *Beyond Zork*; and *Moebius*. Some of these are better than others, but you can be sure of finding a game to suit you amongst those listed.



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Before you, you see
5 Hobgoblins.

Will your stalwart
band choose to
Fight or
Run?
```

Bards Tale. Notable for it's excellent graphic realism, *Bards Tale* has a 3D scrolling window display, showing your current location and the monsters you encounter. Magic and combat routines help spice up the action. Check it out next month...

The Pilgrim's Players' Guide To The Pawn

Part 1

The Pawn was the first adventure to be released by Magnetic Scrolls, now enjoying considerable acclaim following their recent releases, Guild of Thieves and Jinxter. It has excellent graphics and a rather unusual storyline. This tendency to 'weirdness' has put off some players, which is a pity because the game still has a certain charm. If you've got a copy and have found progress difficult, then relax – with the Pilg's Guide you can get back to the game and triumph maginficently.

So you've woken up with a bump on your head...Check your clothing and its contents before heading off east. Should you bump into a certain airborne personage, greet him (SAY TO KRONOS, 'GREETINGS') and he will give you a note, which you should take.

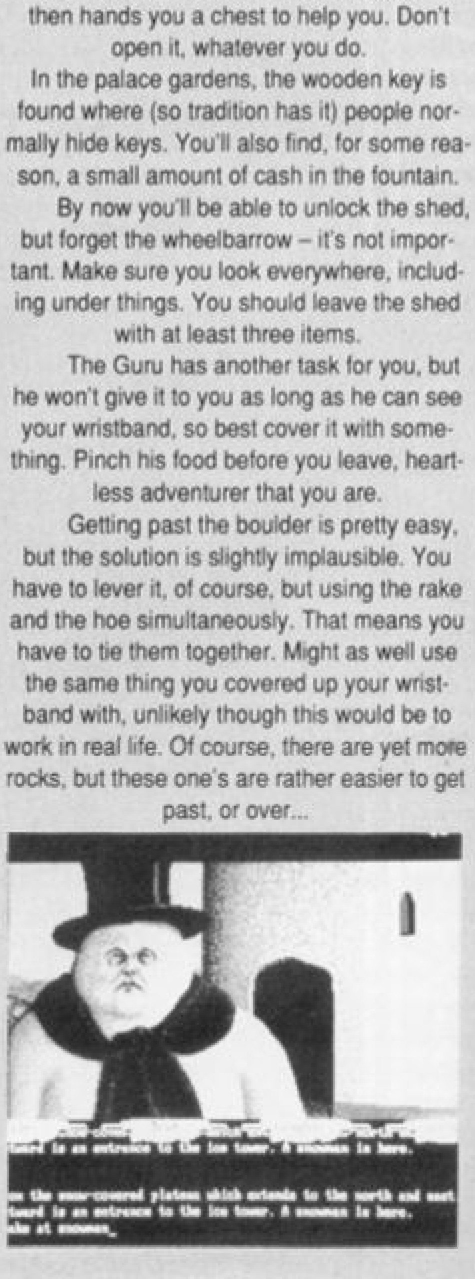
If you examined your clothing and other personal accoutrements, however, you will have noticed an unusual device, which you should ask Kronos about. He will offer to remove it if you perform a certain task and then hands you a chest to help you. Don't open it, whatever you do.

In the palace gardens, the wooden key is found where (so tradition has it) people normally hide keys. You'll also find, for some reason, a small amount of cash in the fountain.

By now you'll be able to unlock the shed, but forget the wheelbarrow – it's not important. Make sure you look everywhere, including under things. You should leave the shed with at least three items.

The Guru has another task for you, but he won't give it to you as long as he can see your wristband, so best cover it with something. Pinch his food before you leave, heartless adventurer that you are.

Getting past the boulder is pretty easy, but the solution is slightly implausible. You have to lever it, of course, but using the rake and the hoe simultaneously. That means you have to tie them together. Might as well use the same thing you covered up your wristband with, unlikely though this would be to work in real life. Of course, there are yet more rocks, but these one's are rather easier to get past, or over...



```
is an entrance to the ice tower. A snowman is here.

on the snow-covered plateau which extends to the north and east
ward is an entrance to the ice tower. A snowman is here.
```

Next month: Killing the adventurer, satisfying the guru, and more...

Pat's Patch

Pat looks forward to 16-bit adventure creating...

Reader Terence Ball of Accrington is interested in writing adventure games for either Spectrum or Commodore 64 and wants advice on creators and markets. For Spectrum the best choice at the moment is Gilsoft's *PAW* which scores over *GAC* in several respects. Balanced against that is *GAC*s availability in a number of formats making conversion to other machines simple.

As for markets, the Commodore has a large world-wide user base while in the UK alone the Spectrum is probably the most popular machine. However, with the move towards disk-based adventures all this is likely to change rapidly, especially with the growing popularity of 16-bit machines like the Amiga and Atari ST.

Two adventure writing utilities are on the way for the ST. Gilsoft intend to release a version of *PAW* which is currently still under development (and the details still under wraps). Meanwhile, Incentive are very close to releasing an upgraded version of *GAC* which has been available for a wide range of 8-bit machines for some time now. The new program, to be known as *STAC*, will be an extension of *GAC* written specifically for the ST series. According to Incentive *STAC* will be '...easier to use, and considerably more powerful and flexible than *GAC*.' and will allow you to '...write professional-looking adventure games with the minimum of programming effort.' You can check out a few more details in this month's edition of *The Travellers' Times* on these pages.

One of the greatest difficulties in writing adventure on smaller machines such as Spectrum, Amstrad CPC and Commodore 64 is the need to find room for all the routines required to give a feeling of reality in the game, yet still find space to develop puzzles, graphics etc. Companies such as Infocom and Magnetic Scrolls have attempted to get around this lack of memory by using the disk as extra memory during play, but this has its own drawbacks. Playing with disk access is often painfully slow and tends to destroy the atmosphere patiently built up in the adventure's depth of programming. If you want good (terrible) example of this, try playing an Infocom game on the Commodore 64 with a 1541 disk drive.

With the larger memory 16bit machines, memory restrictions virtually disappear. STAC occupies around 100K on the 520ST, leaving about 300K free for use. Writers currently feeling stifled coping with less than a tenth of that space on the smaller machines will have plenty of scope in future.

Oops! Several people have taken me to task over the combat routines (issue 2) as I forgot to mention priorities. The line marked Initialise should go in High Priority, included in the condition which checks for the first move in the game so that it is acted on only once. The other lines go in Low Priority and must appear in the order show, though not necessarily in an unbroken group.

Got a Problem? Write to me c/o ACE if you have tips for or need help with adventure creators. Space limits me in the column, so if you need a personal reply please enclose an SAE. No SAE, no reply!

◆ The Travellers' Times

Edited by: The Pilgrim Honorary Editor: The White Wizard Published by Far-Future Publishing
Price: Free with every copy of ACE Magazine

Infocom-ics!

Not content with romantic fiction, linguistic puzzles, real-time, and role-playing, Infocom have introduced yet another game-style to their catalogue – the animated comic.

UK players will already be familiar with this genre. We've seen Melbourne House's *Redhawk*, Palace's *Stifflip and Co*, and we're about to see Infogrames/Ere Informatique's very pretty *Crash Garrett* (see page 15 for preview). So far, few of us have been very impressed with the industry's attempts to mix comic strip with adventure. What will we make of Infocomics?

It's a little unfair to pass judgement solely on the basis of a deomnstration disk, but even so a number of points are immediately clear. The graphics are extremely crude and the storyline suitable for children of tender age. Unlike the British versions, there is no text entry whatsoever. You simply watch the pictures flick by, telling the story, and every so often you can press the RETURN key to switch plot-lines, following the fortunes of another character, perhaps, or a different chain of events.

The first Infocomics title is called *Lane Mastodon Vs. The Blubbermen*, a comic spoof 'written' by Steve Meretsky. Just in case you're thinking that Infocom have finally flipped their lid, you should know that the product will retail in the USA for only $12 – only marginally above their budget category. It's also aimed squarely at comic-reading kids, claiming that each Infocomic has 'at least 10 times more images than standard comic books' and should 'provide 4 to 5 hours entertainment'.

The idea, then, is to compete with comics, not with other computer programs. Can Activision, who are marketing the product in the UK, price it cheaply enough to make this philosophy work? Prices have yet to be announced, but I can't see it knocking 2000AD (which costs 28p) off the shelves.

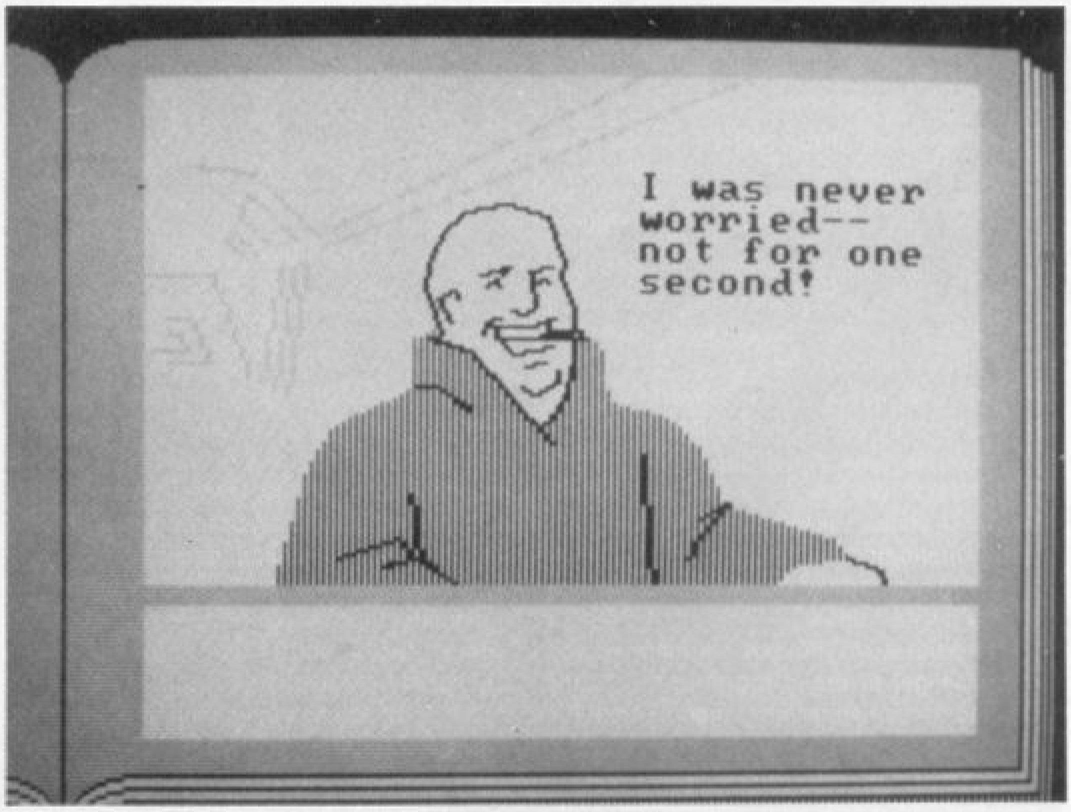
Atari ST Adventure Creator

...or STAC, as Incentive are calling it, is a new adventure generator for the Atari 16-bit machine, due for launch in the very near future. The company claim it is even easier to use than GAC, with added 'disk features' and the ability to generate stand-alone programs. Save and merge of individual data sections is possible and extra conditions have been included for manipulating markers and counters.

Best thing about STAC looks like being the custom-ability of the package. You can define the screen layout as you please and there is greater control over location descriptions and objects. Add to that the ability to include pictures imported from Neochrome or Degas and you have a very powerful package...IF it does everything they say it will! You'll find out soon in Pat Winstanley's exhaustive and authoritative review. Stick with us...

Bards Tale 2

Just to mark our short piece on role-playing games, Electronic Arts are producing Bards Tale 2: The Destiny Knight, a sequel to best-selling



Infocomics: every so often the top right hand corner of the page will fold over, indicating a possible change of plot. You can also 'fast forward/backward' through the frames...

Bards Tale.

The program is 50% larger (in code size) and more challenging than its predecessor, say the company, and features an 'expanded dominion for exploration and adventure, incorporating advanced combat and magic systems.'

The original *Bards Tale* remains one of the best role-playing games, so this new addition should cause a few ripples of excitement. We hope to be able to review it next month in the second part of our role-playing game series.

Level 9 Join Mandarin

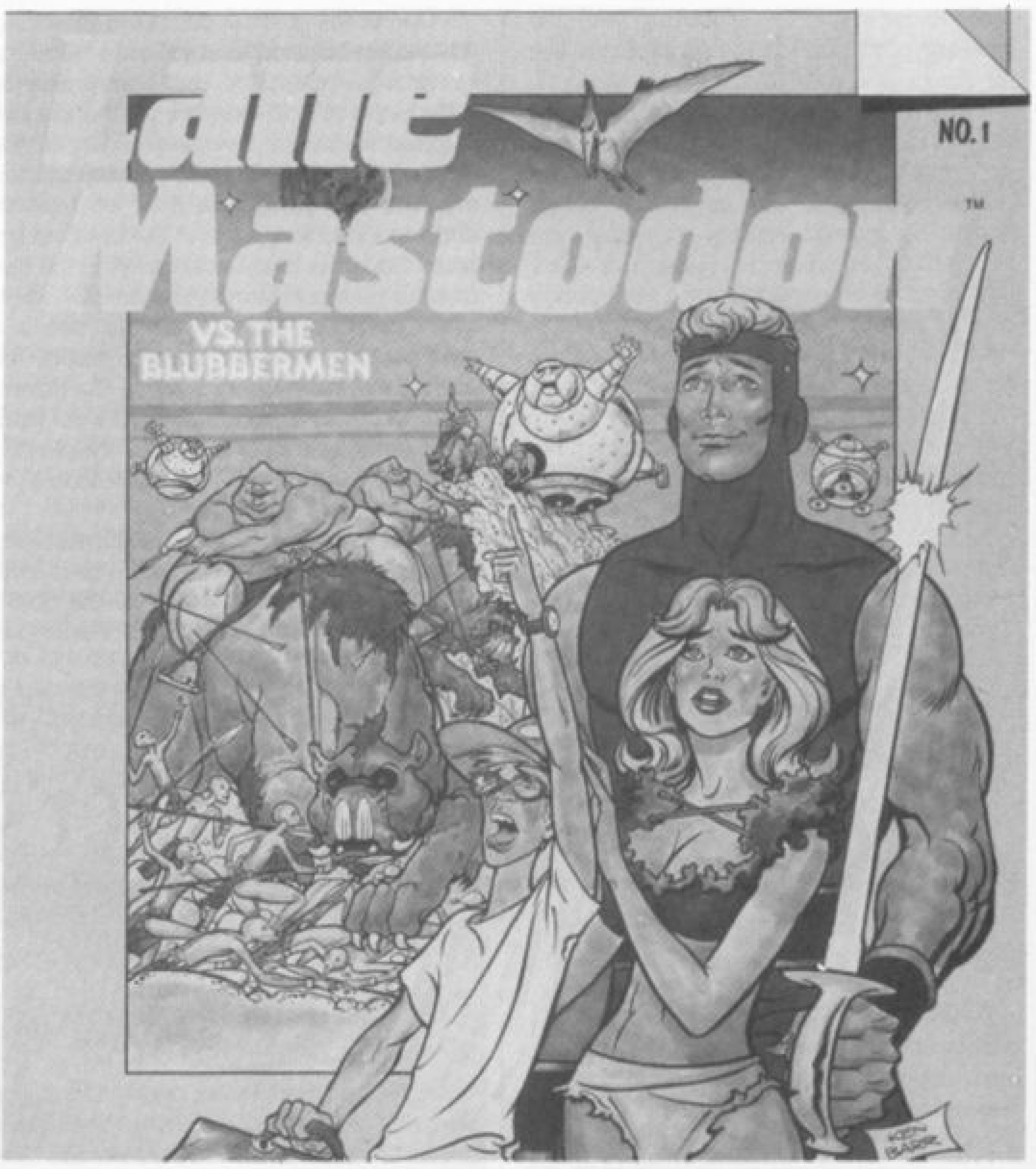
Level 9 have severed relations with Rainbird Software and have tied up an exclusive distribution deal with a new label called Mandarin. The label has been established by Europress International (owners of Database Software, publishers of Mini Office) and is being run by Chris Payne, who old-timers may remember used to work for MicroPower in the good old, bad old days.

Mandarin will now be distributing *Time* and *Magik*, instead of Rainbird. As followers of this column will know, the product has been endlessly delayed under the Rainbird label, so Mandarin will be picking it up and thrusting it upon us in the near future. After that we'll be seeing *Lancelot*, and after that... Let's wish Level 9 best of luck with their new partners.

Level-9-a-Lancelot

Level 9's Arthurian legend, *Lancelot*, is taking shape rapidly now, with the game design finished and the coding well under way. It should appear on your screens in late April or early May.

The company are sticking with the title *Lancelot*, and are taking great pains over the graphics. They've added more hand-drawn pictures because they feel these work better than digitised pictures, especially for interior locations. 'I'm going to write an article on that', said Pete Austin, 'It's quite a complex subject.' Certainly there's no denying that the company's major competitor, Magnetic Scrolls, have produced some stunning interior locations using hand-drawn artwork. Remember the sitting room in *Guild of Thieves*? Or the conservatory in *Jinxter*? Level 9 have certainly got some catching up to do...but we know you can do it, lads, so get to it! ●



Letter from the SHADE

Now you can even get married on-line – Sappho the Witch (Mbx 019998149) reveals all...

One of the questions that I am frequently asked is whether, as an Immortal, I'm fed up with it. The answer is quite simply no. It's like asking if someone is fed up with life – because to some of us addicts, Shades IS life, albeit a fantasy one.

Look at some of the other immortals and what they get up to. The Arch-Wizards, for example, have a very important function on Shades. We are all told that they are there to police the game and Blot (terminate) offenders. But in fact their real function is play vicar and perform the ceremony at Shades weddings.

Of course, if you can get married, you can also get divorced too. And this is the second most important function that the Arch-wizards have to do. A quick word in their ear (note that ear is singular, as no-one has yet discovered whether an Arch-wizard has two or not) and they'll formally officiate at your separation. Lordant, who does a very nice line in harems, performs excellent ceremonies for those who wish to make their illicit love affairs legal. I myself am on my fourth and hopefully final one (wedding, not harem). Lordant's ceremony was very moving (no puns about prune juice, thank you). The quests: Heloise, Eukonidor, Artemis, Graeme, Slime, and Sharra, all seemed to enjoy it. But then weddings always attract the high-flying party-going set.

Raveena (hello sweety), is the unfortunate Immortal who is trying to make an honest Witch out of me – and what an immense task that is. Though the threat of being beaten up with a limp lettuce and whipped cream is enough to keep anyone in line. But that's another story altogether.

Vick, renowned for his/her bolt-on bits, has married Sally, making this Sally's fifth marriage. Vick has also decided to make the add-ons more permanent, probably for reasons quite conjugal in nature. So out goes Vickie, and welcome to Vick, with deep voice and six o'clock Shadow thrown in for effect.

Yes, these Immortals are always up to something, whether it's 'whatever-it-is-they-get-up-to' in the 'super-safe' Bridal Suite, or – in the case of Hazeii the Coder's sidekick, Ambushbug, wearing suspenders to play 'Rocky Horror Meets the Wombles'.

Fed up with being an Immortal? No sir! Or is it madam...

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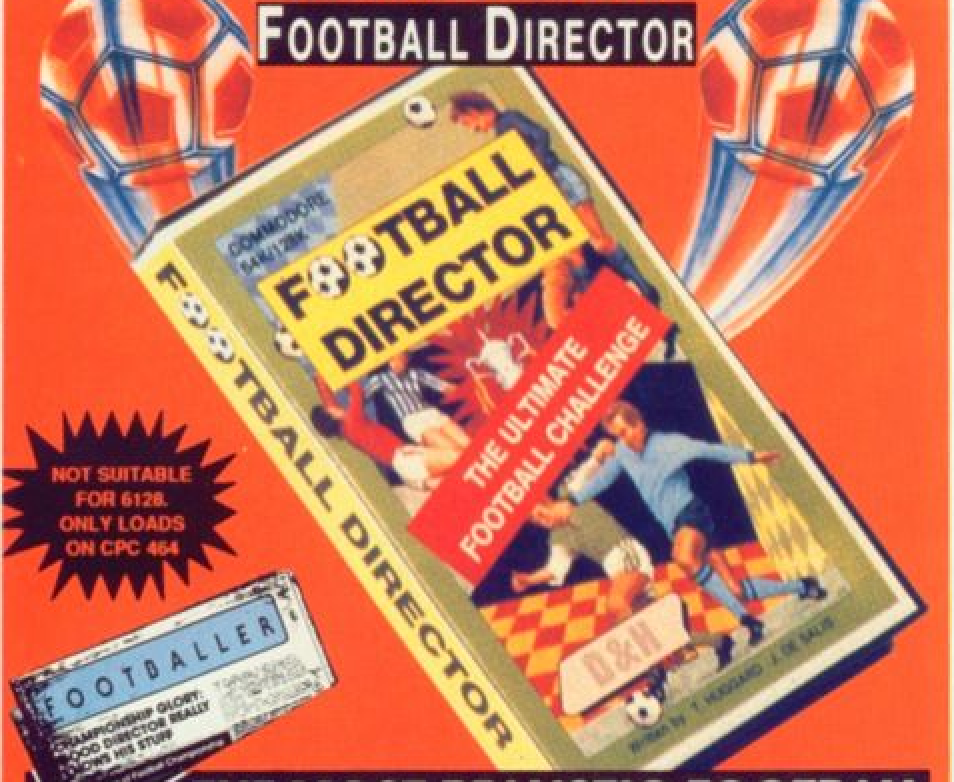
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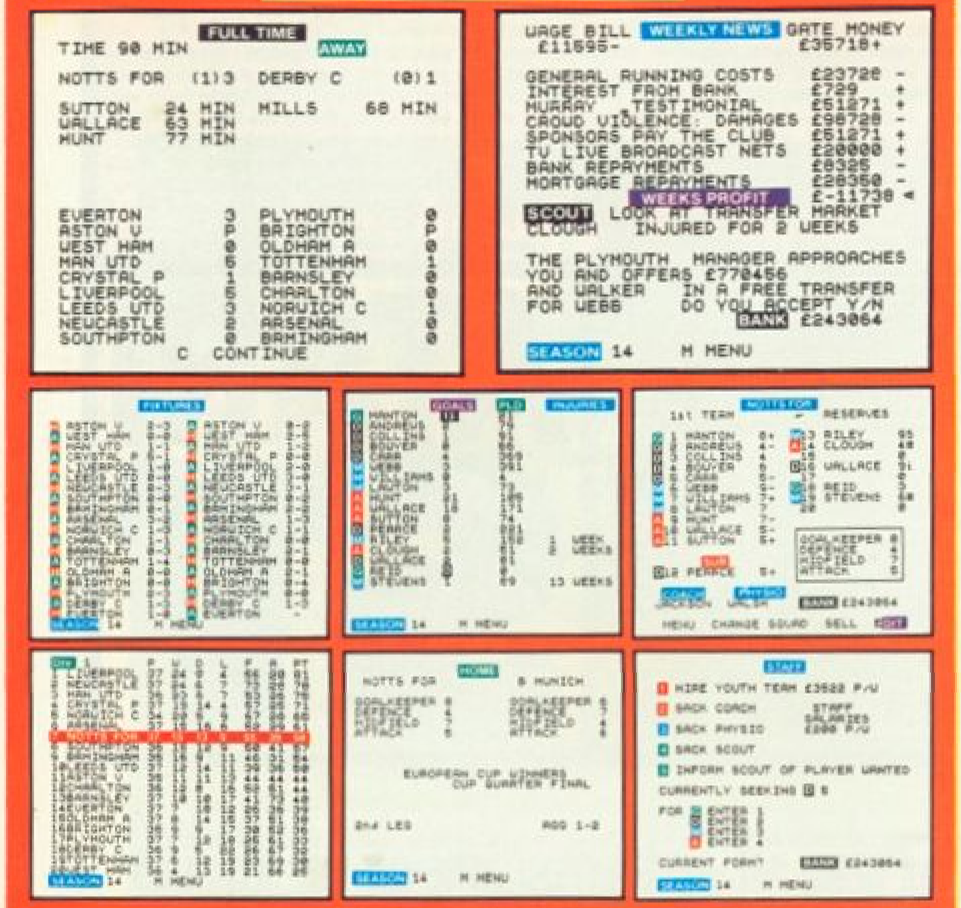

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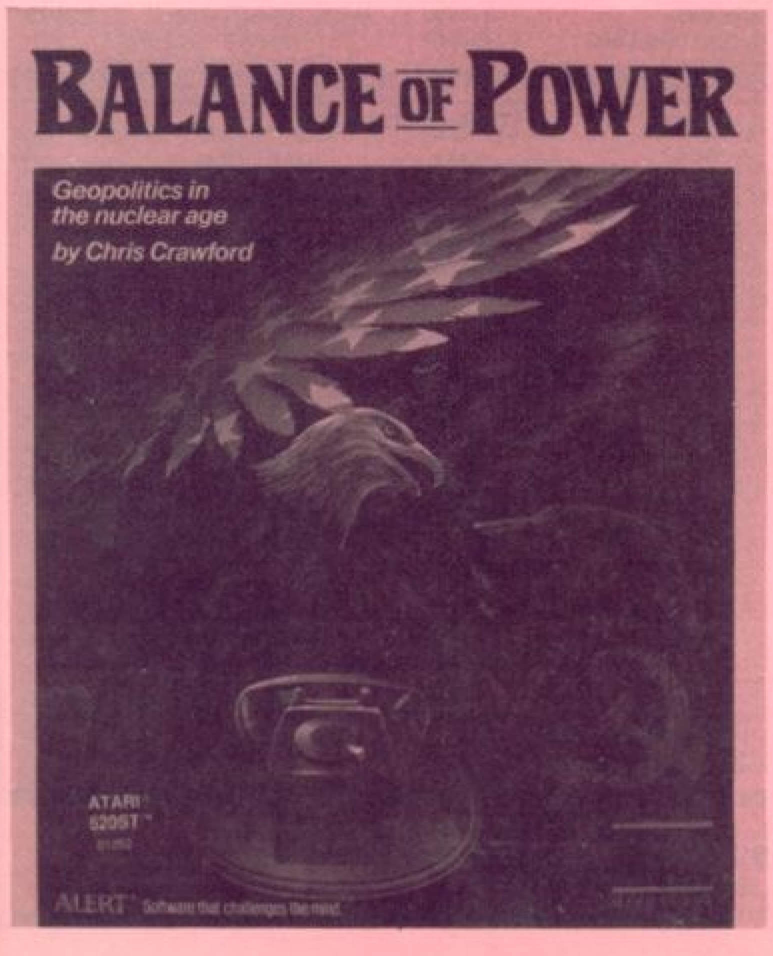
SOFTWARE BUYERS GUIDE

There are some games that any self-respecting micro owner really ought to have – and that anyone new to computer entertainment ought to think seriously about getting. So here it is – the ACE guide that will bring you bang up to date with what are the best games to buy for your micro.

As the world of computer entertainment advances, some of the older games that kept us playing for months on end fall by the wayside to make room for the newer high fliers. But in the ACE guide you'll find a few old favourites that we reckon still cut the mustard.

Programs are listed alphabetically with their publishers, the machines we're recommending them for and their prices on cassette and/or disk. If a machine is not listed for a particular game it means it either isn't available on that format or that we can't recommend it. Look out, too, for versions of these games about to appear on other formats – particularly ST and Amiga.


BALANCE OF POWER
Geopolitics in the nuclear age
by Chris Crawford
ATARI 520ST
ALERT Software that challenges the mind

AIRBALL

Microdeal ● Atari ST £24.95dk

Multi-coloured three-dimensional arcade adventure that owes something to the Ultimate style but is years ahead in terms of graphic detail and presentation. You, as the airball in question, must negotiate corridors and rooms full of various obstacles – all spelling instant death. An outstanding rendition of a popular genre.

ARKANOID

Imagine ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk ● Atari XL/XE £8.95cs ● Atari ST £14.95dk ● MSX £8.95cs ● IBM PC £19.95dk

Conversion from *Arkanoid* the coin-op, in its turn the best version of the classic *Breakout*. Simple in concept: the player controls a bat at the base of the screen, whizzing it left and right. The object is to keep a small ball in play, bouncing it off the bat to destroy formations of bricks in the top half of the screen. Eliminate all the bricks and move on to the next of 33 screens. Clever extra features contribute to the addictiveness. As a faithful coin-op conversion, *Arkanoid* comes out top, but for a different slant on the same theme and some nifty music, try ASL's *Impact*, *which also builds up the difficulty levels more gradually.*

ATARI ST DISK

BALANCE OF POWER

Mindscape/Mirrorsoft ● Amiga £26.95dk ● Atari ST £26.95dk ● IBM PC £26.95dk ● Mac £26.95dk

Definitive strategy game for 16-bitters. The player takes the role of one of the superpowers, while either the computer or a friend takes the other. Then it's a case of trying to win friends and influence people on a global scale. This can be achieved in a number of ways, including supplying arms or financial aid to radical factions in the hope of toppling a government which is not receptive to the great American or Russian dream (depending on which side you're playing). It's complex, involving, and it's difficult to play in ten-minute sessions. Absorbing stuff that gives an insight into the devious world of geopolitics.

BOBSLEIGH

Digital Intergration ● Spectrum £9.95cs ● Amstrad £9.95cs £14.95dk

Bobsleigh is a thrilling game with enough strategy involved to add another dimension to a highly competent and addictive simulation. Have you got the stamina to win your way into one of the top three positions by the end of the season? Remember, sponsors don't back losers. Unfortunately, although Bobsleigh is available for the C64, it's a poor game compared to the Amstrad and Spectrum versions and is therefore not recommended.

BOBSLEIGH
AMSTRAD CPC
CASSETTE

BONECRUNCHER

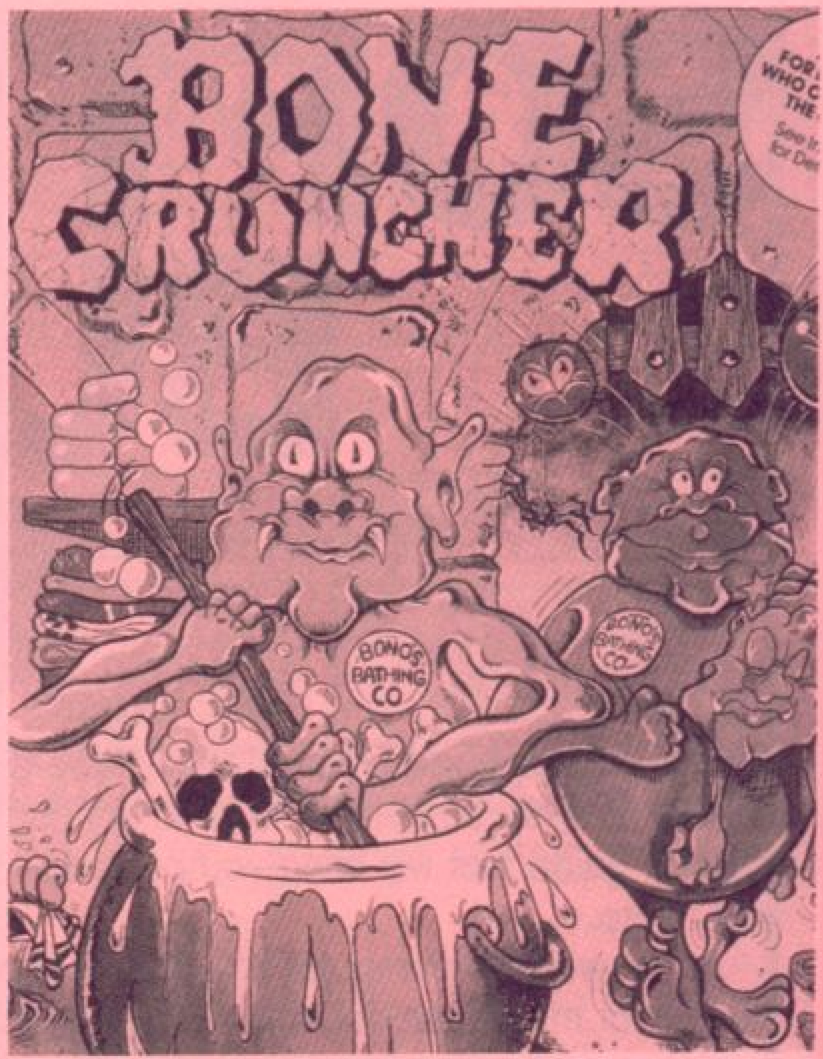
Superior Software ● C64 £9.95cs £11.95dk

At first sight this recent release may appear to be nothing more than a Boulderdash rip-off. However, there are a number of highly innovative gameplay features which give Bonecruncher a feel all of its own. Highly recommended for those who prefer to solve problems rather than shoot them.

BOULDERDASH

Prism Leisure Corporation ● Spectrum £2.99cs ● C64 £2.99cs ● Amstrad £2.99cs

A game that has everything – instant addiction, long-term challenge, frenetic excitement as the clock ticks down and extremely tricky puzzles. You must collect jewels hidden in caverns, digging away earth and boulders to get at them. Boulders can drop and cause you serious damage, while the jewels are often hidden by seemingly impenetrable walls. Complex, but great fun. *Boulderdash* is a classic you can't afford to miss in its budget incarnation.



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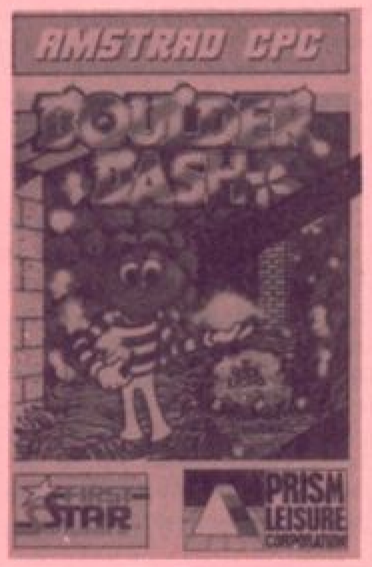
BOUNDER

Gremlin Graphics ● Spectrum £7.95cs ● C64 £9.95cs £12.95dk ● Amstrad £8.95cs £13.95dk ●

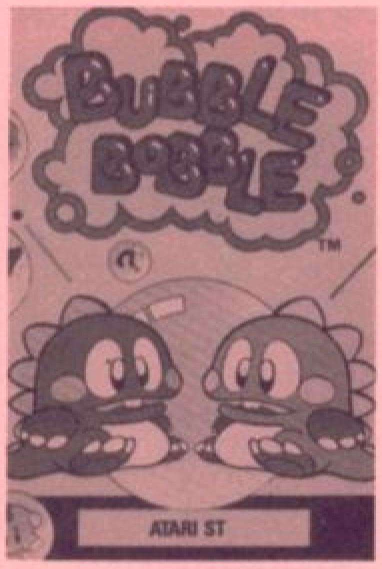
A great arcade bounce-em-up, and very addictive too. You guide a ball as it bounces from one platform to another, high above the vertically scrolling landscape. Land on marked squares and you can stay aloft longer or gain a mystery bonus. Fill in a gap or hit one of the game's many nasties, however, and you'll lose a life. Bonus bouncing sections at the end of each level help vary the pace, and those tough gaps really keep you coming back for more. Bright, witty graphics, great music – and it's so playable.



BUBBLE BOBBLE

Firebird ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk ● Atari ST £19.95dk

Playability is the essence of this two-player coin-op conversion. You and a friend play bubble-blowing dinosaurs, travelling through 100 maze-and-platform screens, fighting off the 'bullies' by encapsulating them in your bubbles to turn them into juicy fruit. More firepower and various bonuses await as you reach the more difficult later screens. Enormously good fun, if a little on the cutesy side. Can also be played as one player against the computer.



BUGGY BOY

Elite ● C64 £9.95cs £14.95dk ● Amstrad £8.99cs £14.95dk

A non-stop action driving game that will keep even the most ardent *Out Run* fans busy for a long while. Collect the time bonuses in the attempt to complete the five gruelling courses. Instantly playable and highly addictive, *Buggy Boy* should be on any racing fan's shopping list

CHESS MASTER 2000

Electronic Arts ● C64 £9.95cs £14.95dk● Amiga £24.95dk ● Atari ST £24.95dk ● IBM PC £24.95dk

Strongest chess game on the Amiga, with excellent graphics, 2D or 3D viewpoint, 12 levels of difficulty and all the playing options you could wish for. Plus some fairly nifty speech synthesis.

CHUCK YEAGER'S ADVANCED FLIGHT TRAINER

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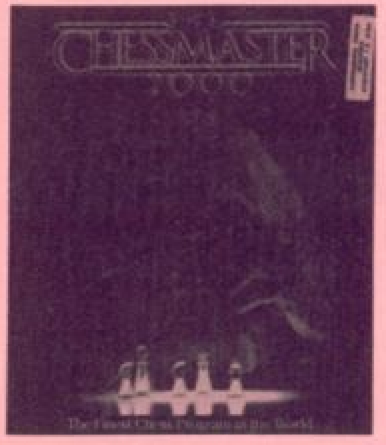

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COSMIC CAUSEWAY

Gremlin ● £9.99cs £14.99dk

The follow-up to the very popular bouncing ball game Trailblazer. The 24 stages of the scrolling landscape race toward you at breakneck speed as you try to guide your ball through the mulitude of obstacles. Less technically demanding than Trailblazer but much more fun and withtremendous variety.

DEFLEKTOR

Gremlin/Vortex ● Spectrum £7.99cs ● C64 £9.99cs 14.99dk ● Atari ST £19.99dk

Optics are the order of the day here (not the spirit dispensers) as the player tries to connect a laser beam to a receiver and at the same time try to destroy a number of cells that are on-screen as well. You'll need to make full use of the mirrors, fibre-optic conduits and polarising and refracting blocks if you're to achieve your aims. Clear the first screen and you'll only have 59 more to do. Fascinating stuff that's horribly addictive.

DIPLOMACY

Leisure Genius ● C64 £12.95cs £14.95dk ● PC £24.95dk

The grand old man of nasty negotiation boardgames finally made it onto home computer and how! The game can handle up to seven players and it's an engrossing and madly addictive game that's a must for micro megalomaniacs.

DRILLER

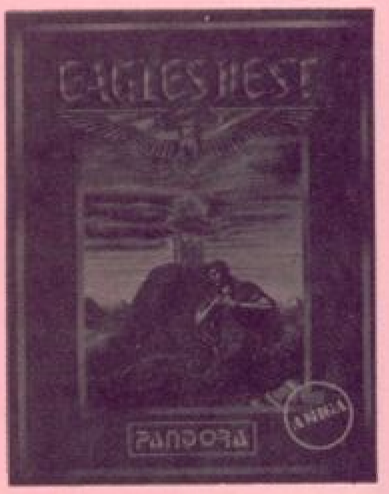
Incentive ● C64 £14.95cs £17.95dk ● Spectrum £14.95cs £17.95 dk ● Amstrad £14.95cs £17.95dk

This three-dimensional masterpiece of exploration and adventure took a year to develop, but the wait was worth it. A whole world was crammed into 8-bit micros to give the player such a feeling of 'being there' it's uncanny. It's bold, dazzlingly original and very playable. A milestone in computer entertainment.

EAGLE'S NEST

Pandora ● Amiga £19.95dk ● Atari ST £19.95dk

This is one of the better Gauntlet clones, especially on the 16-bit machines. The military flavour of the arcade adventure adds atmosphere and if you like this particular style of game, you won't be disappointed with Eagle's Nest.



ELITE

Firebird ● Spectrum £14.95cs ● C64 £14.95cs £17.95dk ● Amstrad £12.95cs £14.95dk ● BBC £12.95cs £14.95dk (available from Superior Software)

Still the best space trading game, *Elite* set a standard for other companies to follow. One of the first space games to use vector graphics, it's a shooting and trading effort set across several galaxies, with plenty of variety to the gameplay. You can trade legal goods in (relatively) safe systems, or run the gauntlet of pirates in the galaxies' danger spots with your hold full of contraband. Either way there's a nice line in zero-G dogfighting, and as big a task as you'll find anywhere.

COMMODORE 64
ELITE
FIREBIRD

EXOLON

Hewson ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk

Graphically superb horizontally-scrolling shoot-em-up in which you run, duck and jump your way along a planet's surface blasting away at alien defences. A gun and a missile launcher are used to blast the foes, but if things are still too tough then you can grab an exoskeleton for extra protection and fire power.

FLIGHT SIMULATOR 2

Sub-Logic ● Atari ST £49.95dk ● Amiga £49.95d ● IBM PC £49.95dk

The venerable godfather of flight simulations, *Flight Sim II* is the standard by which all others are judged. Although it spent a zillion weeks on top of the US charts, it's difficult to get hold of in the UK. If you have the technology, this is an essential purchase.

GUNSHIP

Microprose ● PC £34.95dk

Excellent graphics, involving simulation and a variety of missions make this one of the better PC games. Piloting your 'copter around in order to zap various gooks be terribly tasteful - but if you can stand the politics you should have a lot of fun.

HEAD OVER HEELS

Ocean ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk● Amstrad £8.95cs £14.95dk ● MSX £8.95cs ● IBM PC £19.95dk

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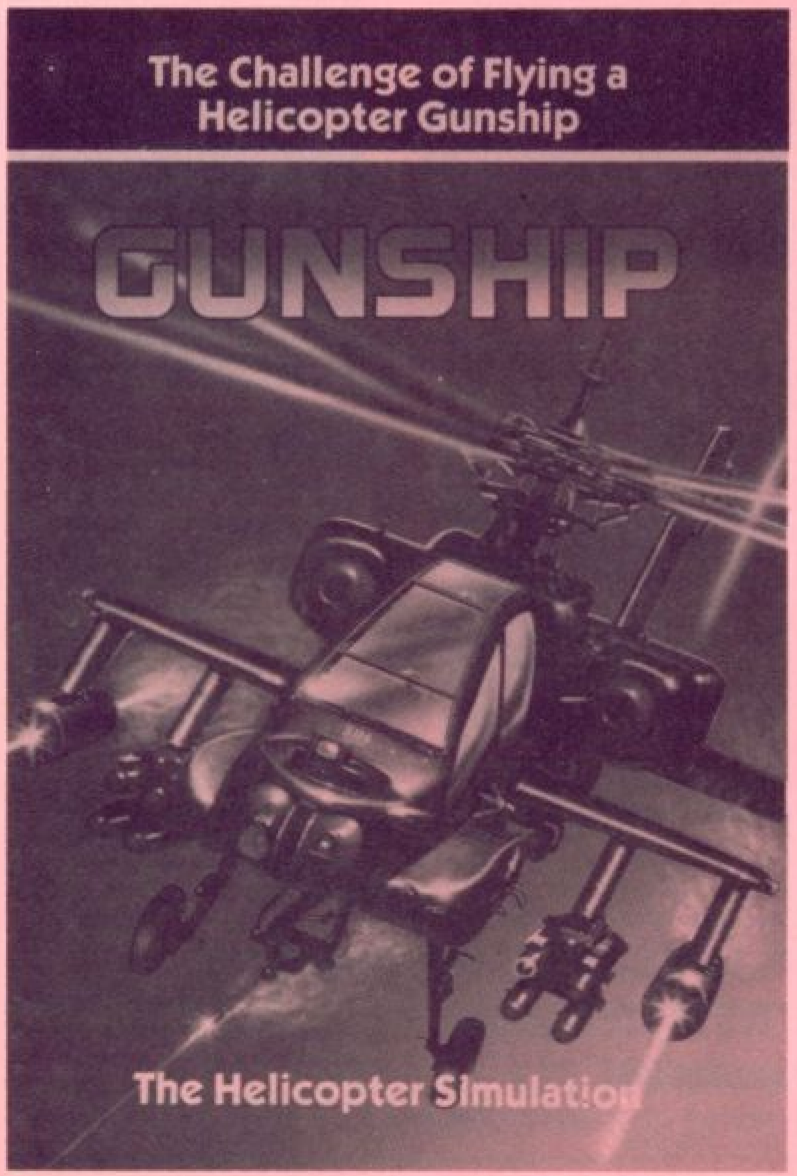
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3D exploration reaches its peak with this huge intricate masterpiece. You play two characters – Head and Heels – as you search for the crowns that will free the galaxy. The puzzles can get very difficult indeed, and you'll often have to split Head and Heels up to use their different capabilities. The game's 300 locations are wittily drawn, and the animation is excellent throughout. A real classic.

HIGHWAY ENCOUNTER

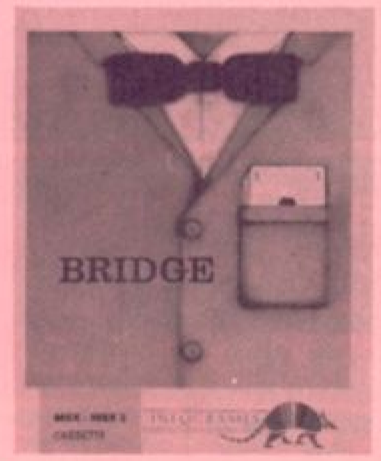
Vortex (available on *The Best of 3D* compilation from US Gold) ● Spectrum £8.99cs ● Amstrad £8.99cs

Each game in this compilation is an excellent example of Vortex's 3D animation and tough gameplay, but *Highway Encounter* stands out in both departments, as you plot your route along said highway fighting off threats from a mutant tribe of dustbins.

INFOGRAMES' BRIDGE

Infogrames ● Amstrad £12.95cs £15.95dk ● MSX £12.95cs

Graphically the best of all contract bridge simulations, with large playing cards depicted against a suitably green baize background. Plays a good game (for a computer, which after all is a bit short in the imagination and flair department), and features a wide range of options and bidding conventions which you can toggle on and off according to your style.



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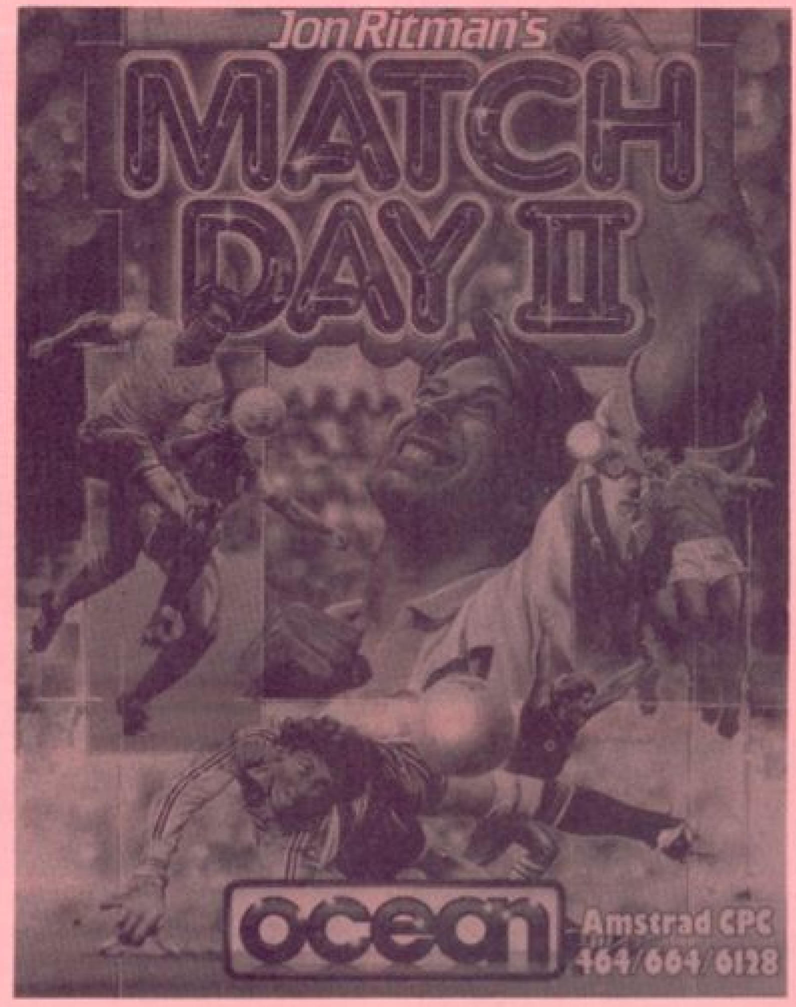


MAGIC KNIGHT TRILOGY

Mastertronic ● *Knight tyme* Spectrum £2.99 cs Amstrad £2.99cs ● *Spellbound* Spectrum £2.99 cs Amstrad £2.99 cs C64 £2.99 cs ● *Stormbringer* Spectrum £2.99 cs Amstrad £2.99 cs

This trilogy is a series of menu-driven arcade adventures which, as well as all the expected running and jumping, have a complex system of interaction between characters. In *Spellbound* you must rescue Gimbal the Wizard from the fearsome Castle of Karn; in *Knight Tyme* you have to find a way back in time after being catapulted into the 25th century, while in *Stormbringer*, the final part, we find that the magic knight has been split in two, one part good, the other evil. You can't kill yourself, so the only solution is to merge the two halves. But how? Lots of action, plenty of thought and good graphics make all three winners.

MATCH DAY 2

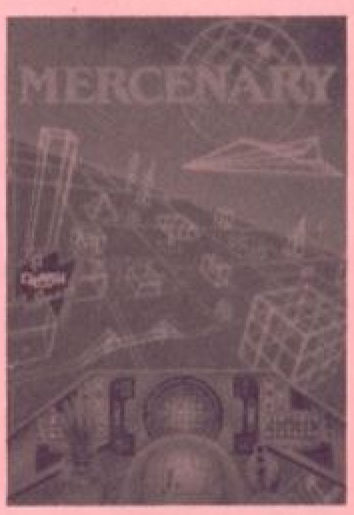
Ocean ● Spectrum £7.95cs £14.95dk● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk

Definitely *the* football game on micros; magnificent animation, great gameplay, vicious and skilful computer opponents. Various improvents over the original make this a must for all computer football fans.

MERCENARY

Novagen ● C64 £9.95cs £12.95dk ● Amstrad £9.95cs £19.95dk

Fly around a city of strange buildings and explore the maze of underground passages all presented to you in fast, smooth vector graphics. Your goal is to escape from war-torn Targ by buying, stealing or earning an interstellar ship. Join forces with either of the warring Paliars or Mechanoids or play them off against each other.



NEBULUS

Hewson ● C64 £8.95cs £12.95dk ● Spectrum £7.95cs

Guide Pogo to the top of eight towers using the spiral of platforms, lifts and ledges that form the route. It's a highly original game game that strikes a fine balance between frustration and addiction added to which is the rotary scroll, thus making it a good-looking, playable winner of a game.

PITSTOP 2

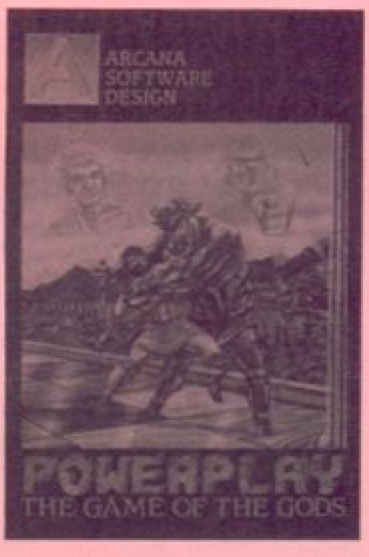
Epyx/US Gold ● Available only on Epyx Epics compilation ● C64 £9.95cs £14.95dk ● IBM PC £29.95dk (in compilation with Winter Games and Summer Games 2)

Thrilling racing game where the screen is split into two and you can race the computer or a friend. Lots of different Grand Prix circuits, tyre blow-outs and of course the all-important pitstops guarantee to give you hand cramp and your brain a real racing treat.

POWERPLAY

Arcana ● Amstrad £8.95cs £14.95dk ● C64 £8.95cs £14.95dk ● Amiga £19.95dk ● Atari ST £19.95dk

If you want to try out your general knowledge, we reckon you'd be better off with this original and challenging combination of strategy game and quiz than with the admittedly monster-selling *Trivial Pursuit*. Graphically very pretty in its setting on Mount Olympus, home of the Gods.



QUEDEX

Thalamus I C64 £9.99cs £14.99dk

In this impressively challenging game you must steer a metallic ball through ten different screens of mazes, bonuses and obstacles, all within a set time limit. This simple game concept has a host of added gameplay features which make it particularly pleasing: you can carry over unused time to the next screen, so take on easy screens first and shore up plenty of time to tackle the more fiendish ones; and you can tackle the different screens, or 'planes' in any order you wish. Excellent graphics and the play is utterly absorbing.

RED L.E.D

Starlight ● C64 £9.99cs £12.99dk ● Amstrad £9.99cs £14.99dk ● Spectrum £8.99cs

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within the game. Using the peculiar talents of each droid is essential if you hope to complete this hugely addictive game.

SCRABBLE

Leisure Genius ● Spectrum £9.95cs ● C64 £12.95cs £14.95dk ● Amstrad £9.95cs £14.95dk ● IBM PC £24.95dk

Leisure Genius
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SCRABBLE

The hugely-popular word game translated very successfully on to the micro. Fast, excellent display, and a surprisingly large vocabulary (even if it does include some strange-looking words on occasions). Will give even strong humans a tough game at the higher levels.

SENTINEL

Firebird ● Spectrum £9.95cs ● C64 £9.95cs £14.95d ● Amstrad £9.95cs £14.95dk ● Atari ST £19.95dk

Bizarre and compelling strategy game played over the chequered surface of a planet dominated by the Sentinel. Fundamentally you have to absorb energy while trying to stop the Sentinel from absorbing yours. A clear brain and fast trigger finger are both necessary in this very original and large – 10,000 possible landscapes – game.

SKULLDIGGERY

Nexus ● Atari ST £19.95

Boulderdash clone that completely outdoes the original on this particular machine. Again (see *Boulderdash*, above) you're digging for diamonds in caverns over 100 different screens – with a time limit for each screen. *Skulldiggery* scores on playability (easier screens to begin with and a choice of starting point) and its entertaining two-player option.

SPINDIZZY

Electric Dreams ● Spectrum £9.99cs ● C64 £9.99cs £14.99dk ● Amstrad £9.99cs £14.99dk

Tremendous stuff; steer your spinning top over tough obstacles and collect jewels, against a fiendish time limit. The game landscape is a vast system of catwalks, ramps, towers, and trampolines surrounded by lethal drops – and NO safety rails. There are floor switches to activate lifts and bridge gaps, but tripping them in the right order can be harder than it looks. A few bad guys and a lot of nice touches, but the exploration's the thing.

SPORE

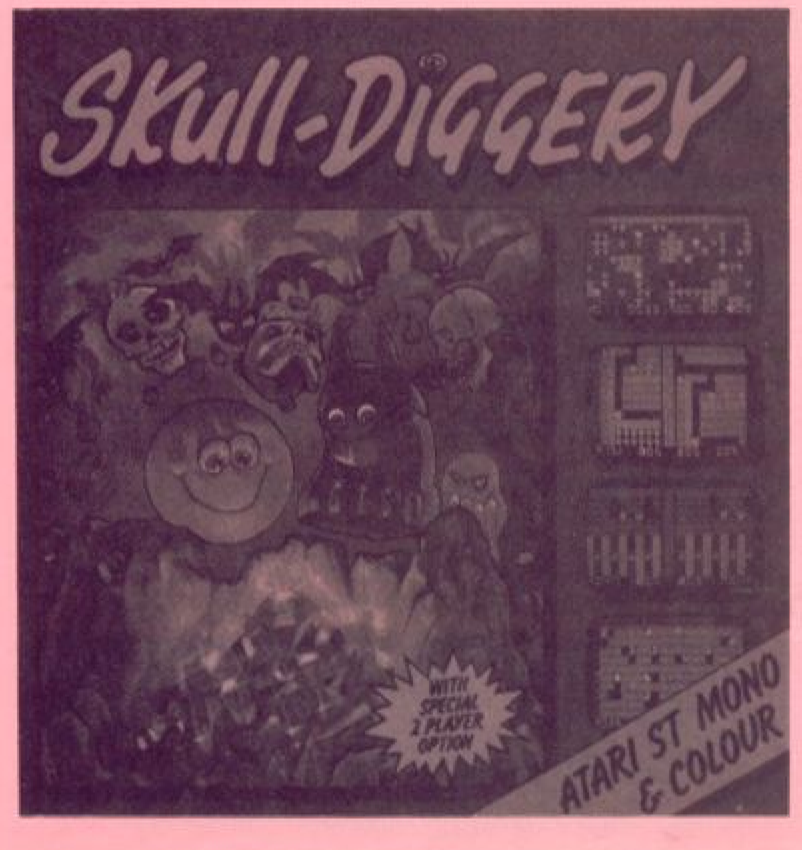
Bulldog ● C64 £1.99cs ● Amstrad £1.99cs ● Spectrum£1.99cs

The winning combination of strategy, frenzied blasting and great graphics make *Spore* a worthy full-price release – what a bargain then to be able to pick it up for £1.99!

STARGLIDER

Rainbird ● Spectrum £14.95cs £19.95dk ● C64 £14.95cs £17.95dk ● Amstrad £14.95cs £19.95dk ● Atari ST £24.95dk ● Amiga £24.95dk ● IBM PC £19.95dk

Starglider is a shoot-em-up cum strategy game boasting vector graphics at their very best. The screen is essentially your view from the cockpit, your objective is to destroy the 'starglider', flagship of the Egron forces who have invaded your homeland Novenia. Standard issue scenario, but an outstanding game.



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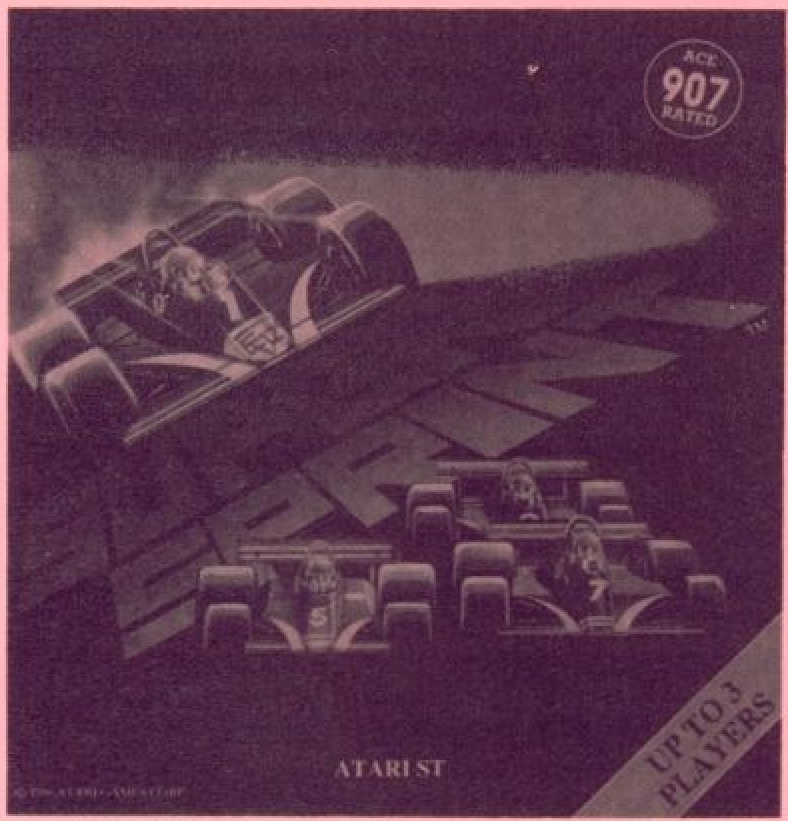
SUMMER GAMES

Epyx/US Gold ● C64 £9.95 cs £14.95dk ● Atari XE £14.95dk (Summer Games 1 only) ● IBM PC £29.95dk

Epyx sporting simulations are of high quality, but none have quite captured the playability and style of the original *Summer Games* and its immediate successor, *Summer Games 2*. One to six players can take part in high jump, gymnastics, springboard diving, clay pigeon shooting, swimming, pole vault – and others – with lovely large graphics and smooth animation throughout. Control of your athlete can be complex so practice is recommended.



SUPER SPRINT

Electric dreams ● C64 £9.99cs £14.99dk Amtrad £9.99cs Spectrum £9.99cs ● Atari ST £19.99dk

One of the better coin-op conversions currently available. With up to three players all competing at once, the action is fast and furious and it will take a finely-tuned car to complete some of the more tortuous circuits that appear later in the game.

TAU CETI /ACADEMY

CRL ● Spectrum £9.95cs ● C64 £9.95cs £14.95dk ● Amstrad £9.95cs £14.95dk ● Atari ST £19.95dk ● Amiga £19.95dk

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Flight simulator/shoot-em-up and its sequel which are both incredibly smooth and well put together. The attention to detail is impeccable as you set off on hair-raising missions as a space cadet. In *Academy* you get to design your own space skimmer craft as well.

THINK!

Firebird ● Spectrum £1.99cs ● C64 £1.99cs ● Amstrad £1.99cs

Originally released by Ariolasoft at full price, but now available for a fraction of that from Firebird. It's a horribly addictive game played on a 6x6 grid – either one or two player – in which you attempt to connect four counters, horizontally, vertically or diagonally. A compelling puzzle which incorporates many additional features and skill levels.

THRUST

Firebird ● Spectrum £1.99cs ● C64 £1.99cs ● Amstrad £1.99cs

Terrifyingly sensitive controls and a large helping of real-life physics make this budget title an absolute must. Flying down through the caverns of an enemy-held planet, you have to pick up fuel and destroy hostile gun turrets without crashing into the tunnel walls. Tough enough as it is, but then you've got to make the return journey with a heavy load slung under your craft. Very mean, very addictive.

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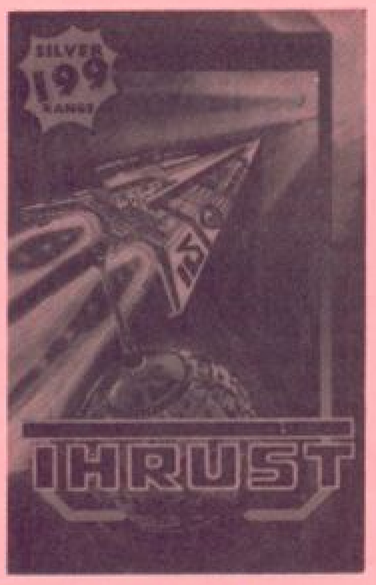

THUNDERCATS

Elite ● C64 £9.95cs £14.95dk ● Spectrum £7.95cs ● Amstrad £8.95cs £14.95dk

The game based on the hit TV series/comic/plastic toy. It's a side-on view scroller that just oozes gameplay. Each of the game's 14 levels is a straight line dash from start to finish with a multitude of obstacles to avoid along the way. Graphically impressive and compulsively playable too.

TOMAHAWK

Digital Integration ● Spectrum £9.95cs ● Amstrad £9.95cs £14.95dk ● Atari ST £24.95dk

One of the all-time great flight simulators, *Tomahawk* also has a strong combat edge to it. Flying a US Army Apache helicopter is a complex business, and the game's realistic controls make no concessions for learner pilots. Choose one of the three combat missions and you can fly out to attack ground targets, while keeping a weather eye open for enemy aircraft. Landscape, buildings and vehicles are all drawn in crisp vector graphics.

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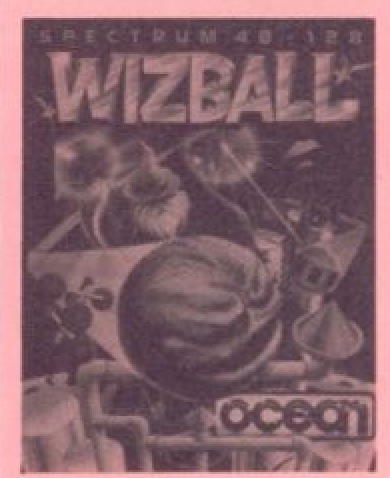
UMS

Rainbird ● Atari ST £24.95dk ● IBM PC £24.95dk ● Macintosh £34.95dk ● Amiga £24.95

Rainbird's Universal Military Simulator is designed to simulate a conflict between two forces on a user-definable terrain that can be viewed in three-dimensions from any one of eight directions. The program heralds a new era in 16-bit computer wargaming. The ST version is available now with the other versions following shortly.



URIDIUM

Hewson ● Spectrum £8.95cs ● C64 £9.95cs £12.95dk ● BBC £9.95cs £14.95dk

The piece de resistance of scrolling shoot-em-ups: blast the dreadnought and attacking ships while dodging around any large structures. Great metallic-looking dreadnoughts and the smoothest scrolling you'll ever see put this head and shoulders above the opposition. A game not to be missed, especially now that C64 versions come packaged with the excellent *Paradroid*.

VULCAN

CCS● Spectrum £9.95cs ● Amstrad £9.95cs

An elegant, simple and ingenious wargame, *Vulcan* covers the Tunisian campaign of 1942-43. A huge playing area and air attack phase make the game an improvement over the same author's earlier works *Arnhem* and *Desert Rats*. *Vulcan* is fast, efficient and simple to play, and no self-respecting wargamer should be without it.

WIZBALL

Ocean ● Spectrum£7.95cs ● Amstrad £8.95cs £12.95dk ● C64 £8.95cs £14.95dk

A compelling and original ball game in which you become the wizball and attempt to conquer the colour creatures who are out to eliminate the spectrum and render the landscape grey and drab. Controlling the wizball is great fun and makes this one of the most playable

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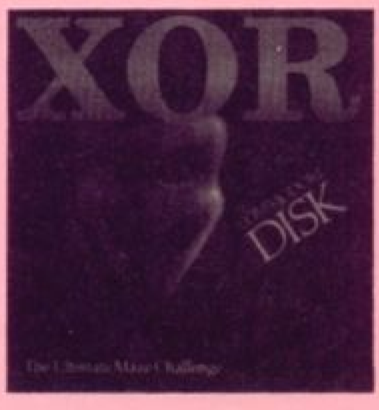
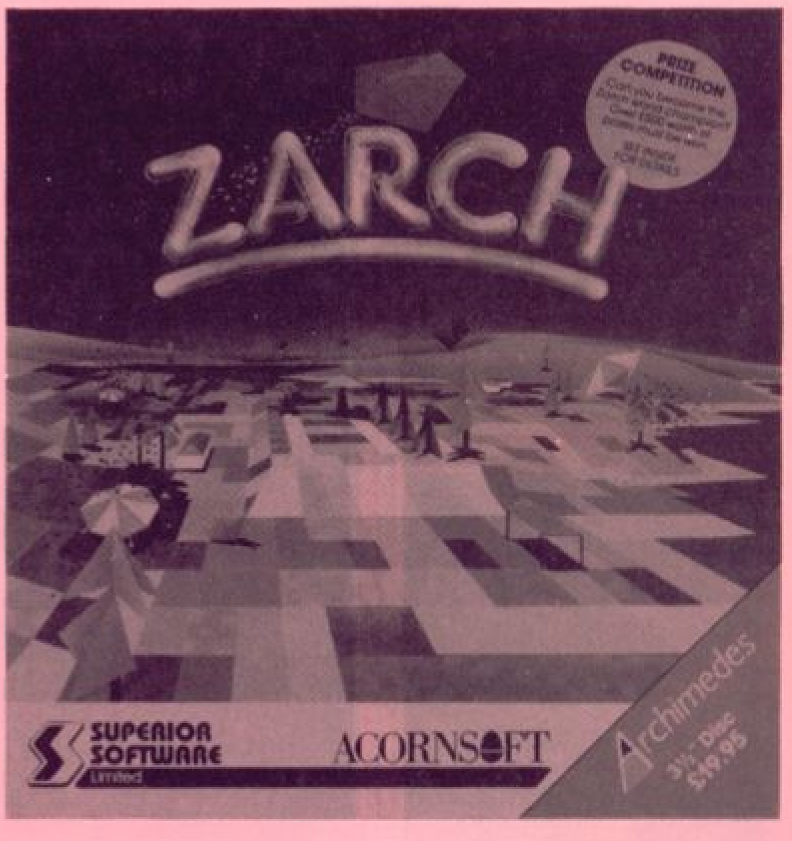
game to have appeared for a long time.

XOR

Logotron ● Spectrum £7.95cs ● Amstrad £9.95cs £14.95dk ● BBC £9.95cs £12.95dk

Extremely tricky maze game involving the player controlling two shields, and collecting masks through 15 mazes, which increase in complexity as you progress. Also in later stages, fish and chickens lie in wait, often blocking the masks and just waiting to fall on you and bring your quest to a premature end. Later still, the fish and chickens are the least of your worries as bombs, transporters and dolls crop up to conspire against you. Smooth scrolling, simple graphics, this one requires planning to complete successfully.





ZARCH

Superior Software ● Archimedes £19.95dk ● Amiga and Atari ST versions under development.

ACE'S highest-rated game to date. A solid three dimensional shoot-em-up with such graphic perfection and timelessly addictive gameplay that it became an instant classic. Zarch could do for the Archimedes what 'the juggler' did for the Amiga.

ZOIDS

Martech ● Spectrum £7.95cs ● C64 £8.95cs £14.95dk ● Amstrad £8.95cs £14.95dk

The game of the toy, an icon-driven arcade adventure, in which you fuse your mind with a zoid, then stomp around the zoidstar in search of the pieces of the mighty Zoidzilla. Tactics are needed if you're to survive long enough to come near to completing this thrilling game. It takes a while to get into, but it becomes so engrossing that it's well worth persevering.

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ACE READERS' PAGES

The space which YOU fill

Small ads, club announcements, event details, pen pals, offers of help - all these and more are on offer here. A unique way of contacting tens of thousands of like-minded computer users.

We're particularly keen to receive entries to the Helpline offering assistance on particular games you may have solved - adventures or others. Or offering technical expertise on aspects of particular machines.

Why not make your contribution?

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● **BBC B+**, disc drive (80 track), tape recorder, joystick, monitor stand, books, magazines and many games. Tel (0280) 815388.

● **Magazine Back Numbers** (many with "listings"). 47 copies of Your Computer; 29 copies of ZX Computing/ZX Monthly (now deceased); 32 assorted. Offer to: E G Moody, 19 Crossgate Lane, Pickering, North Yorks. YO18 7EX.

● **Printer — MP 200**. Draft @ 200 CPS, NLQ @ 40 CPS. (Better version of popular MP 165.) Has excellent NLQ characters, Tractor & Friction Feed. Very Fast! Epson compatible. Less £ than MP 165 – £210! Further details, Tel: 01 204-4838. (evenings)

● **Back Issues of Amstrad Action** 16-26, Computing With The Amstrad Vol 3. no.4-10, Amtix 16-18, C&VG, March 85-Nov 87. 50p each. Phone Ian on (0227) 463342 After 4pm.

● **Commodore 64**, C2N tape recorder, over 45 games including Boulderdash IV, Fist II, Five Star, Sanxion, Micro-Rhythm I & II, Star Paws, World Games, etc. 64 Zzap & CU mags. £110. Ring (0633) 420727. All boxed.

● **CBM128**, tape deck, joysticks £185, D/D, spare disks, 10 original disk games £180. Printer, W/P £120. £300 original tape games £100. The lot £500 o.n.o. Phone Scott on 01-735 7290.

● **GP50S Printer** for Spectrum+. Spare ink ribbon. Good condition. Cost £80. Will sell for £50. Tel: Barnsley 287741, after 4pm.

● **128K Spectrum**, still boxed and in very god condition. 2 joysticks, Kempston interface, cassette recorder and 5 octave, 8 voice music keyboard, (all manuals and leads included). £70 worth of magazines and books, £450 worth of software including Starglider and GAC. Will accept £250 for the lot (ono). Tel: Thirsk (0845) 577320 anytime.

● **Sega Master System** + four cartridge games and two Sega cards. Great value. Worth £250. Only 6 months old. Sell for £80 ono. Available weekdays after 6pm. Tel: Nick on Romsey 513386

● **Amstrad CPC464**, colour monitor in excellent condition. Plus freebies (over £1000 games, stereo lead, Multiface 2 joystick) worth £1600. Sell for £280 ono. Phone now Farnworth (0204) 72100 or 72443.

● **Commodore pokes** etc. One booklet contains 70 pokes £1.30. One booklet contains 130 pokes £2.25. Send cheques, postal orders, wrapped coins to: Andrew Locker, 29 Broom Crescent, Rotherham, S Yorks, S60 2SS.

● **Colour 464** + DD1 disc drive + light pen + Amdrum + AMX Mouse + Joysticks + Speech Synthesizer + 'Doubler' copier + Multiface + manuals + magazines + £400 games + tape unit. Enquiries: Tim after 6.30 pm (Derby) 850425 — £740.00 ono.

● **CBM64**, 1541, disk drive, tape, joysticks, loads of software and blank disks. Worth £1100+. Sell for £380 ono. Tel: (0491) 39562 4-9 weekdays. Ask for Howard.

● **Amstrad CPC 464** — colour monitor in excellent condition and freebies (£1000+ of games, a joystick, Multiface II. £280 ono. Tel (0204) 72100 or 72437.

● **Amstrad 6128**, colour monitor, disc drive, joystick, 100+ games and utilities, magazines, brand new, under guarantee, £450 ono the lot! or swap for Amiga. Tel: Mark, Waterlooville 266541 after 5pm.

● **WS2000 modem**. 300/300 and 1200/75 inc. RS232 lead. Absolutely perfect. Cost £125. Offers? Ring John on 07914 2963 after 6pm (Sussex).

● **Spectrum 48/128+2** computer. 3 months old. Ex cond c/w ch.125+ joystick and £200 worth of software. Total value £340. Accept £220 ono. (Top quality games). Tel: 0473 713 715 genuine sale.

● **Commodore Compunet modem**, ace condition. Worth £75. Will accept £50 for it. Phone (0473 602494, ask for Vik. Write: 14-16 Ranelagh Raod, Ipswich, Suffolk IP2 0AA.

● **Commodore 64**, CBM tape recorder, two joysticks, £500+ of games, all originals like: Nemesis, California Games, Roadrunner, Super Sprint, Re-bounder etc, magazines. Good condition. £235 ono. Great bargain. Hurry, phone 01-891 2037.

● **Amstrad DK 'tronics lightpen**. Manual and tape in original packaging in full working order. Any offer phone 0302 (Doncaster) 721937.

● **Amstrad CPC464** with green monitor, modulator, joystick, disk drive, built in tape deck and plenty of games and serious software. Worth £600. any offers? Will split if necessary. Phone 01-254 3097.

● **CBM 64**, 1570 disk drive, Seikosha Graphix printer, cassette, Neos mouse, Expert cartridge, £100's worth of games, Gunship, Chuck Yeager, Kennedy Approach, Easy Script, lots more + Zzaps + C. Users. Worth £800+. Accept £350 ono. John 061-448-1225.

● **1701 monitor** £199. MPS 801 printer £199. Modem £99. Loads of software plus Koala Pad Simon' sBasic. 3 CBM 64 £99; £750 lot. Will split. Phone 0527 27995 ask for Ian.

● **BBC B** including D.F.S. chip, joystick interface, all leads, 400K Cumana double disc drive, over £100 worth of games, word processing discs. Tel: Jason on 0446 735865 £300 ono.

● **Commodore 64**, accelerator plus disk drive, C2N datasette, Expert and Freeze Machine back-up cartridge, Currah speech cartridge, over £200 in software, magazines. Shop value £630. Sell for £350ono. Tel 0793 694352.

● **C64**, datasette, joystick, over £400 of originals, over 120 games: Out run, Defender of Crown, 720°, last Ninja, Test Drive, IK+, Combat School, California Games. £150 ono. Tel: (0234) 42795.

● **BBCB** in excellent condition. All leads plus 2 joysticks, £250 of top games. All worth £670. A bargain at only £150 ono. Tel: 01-733 5837 after 6pm.

● **Amstrad 6128** still boxed and in excellent condition with tape recorder and games. Two years warranty. Free delivery £250. Tel: Sam on (0525) 378774.

● **Hitman and Ascot** — 2 top Spectrum games, only £1.99. Order before April for a free game! Cheque or cash to Alan Starck, 5 Watson Close, Bury St Edmunds, Suffolk IP33 2PG.

● **Final Cartridge II** for CBM64 £25. Flippy 5 ¼" disk, two notches 10 for £9. Tel: 0905 353413 after 6pm.

● **CBM64 program listings**. Many good quality m/c programs. Send SAE for details to Mr JG Homer, 151 Peveril Crescent, Sawley, Long Eaton, Notts. NG10 3DW.

● **Spectrum+2** for sale or swap. Lots of games. Tel: 01 578 1543.

● **Two C64 Datasettes** available £15 each and one Commodore joystick at £5. Phone 01 699 5012. Dorian Oliver, 7 St Georges Parade, London. SE6 4DT.

● **Commodore 64** computer with Datasette, games, joystick, magazines. For only £120. In perfect condition and everything boxed. Stifford Clays, Grays, Essex. Please phone 0375 376222 for more details.

● **Atari 520STFM**, joystick and software. Excellent condition, only 3 months old. Full packaging, manuals, mouse etc. Will sell for £200. Phone 061 728 2838 and ask for Paul.

● **Amstrad Dot Matrix graphic printer**, hardly used, as new, Offers please. Tel: (0325) 317671 (Newton Aycliffe, County Durham).

● **48K Spectrum** (slight repairs needed and all leads etc. included) and data recorder to swap for lightpen and interface or anything else. Parcel and postage will be paid if necessary. Write or telephone. Connor Keown, Whitehill, Ballinamallard, Co Fermanagh, N Ireland BT74 NYC. Tel: Ballinamallard 286.

● **Sinclair Spectrum 48K**. Includes tape recorder, joystick, interface, magazines and software. Total value over £500. Sell for £250. Tel: (0224) 861452 Mon to Fri after 4pm. Ask for Kevin.

● **BBC B 0S 1.20**, DFS 0.90, AMX Mouse, Super Rom V3.31, Super Art, Voltmace Delta 3B twin joystick, BBC disc drive, software worth £400+, tape recorder & leads, mags & manuals. £800 ono. Tel: Paul (after 5pm) 06845 63343.

THE ACE HELPLINE

Here's a great way of receiving free advice from public-spirited readers. This month it's restricted to adventure games, but we'll be expanding it to include other kinds of help.
If you make use of this service, please respect the Helpline code:
• If writing for help, enclose a stamped, self-addressed envelope.
• Do not make phone calls at anti-social hours.

• Bureaucracy, Knight Orc, Guild of Thieves, Pawn, Leather Goddesses of Phobos, Wishbringer, Zork 1, Red moon, Return to Eden, Snowball, Worm in Paradise, Price of Magic, Lord of the Rings, Kings Quest II, Hawk, Spiderman, Dungeon Adventures, Colossal Adventures, Adventure Quest, MacbethI, II, & IV, Fourth Protocol I, II, & III, Jinxter, Hollywood Jijinx, Trinity, Moonmist, Cutthroats, Zork II & III, Gnome Ranger (Part I).

RGB Marshall, 3 Mereside Avenue, Congleton, Cheshire, CW12 4JZ.

• I have completed the following: The Pawn, The Bard's Tale, Ultima IV, Phantasie I, Dracula, Never Ending Story, Zork III, Wishbringer, Enchanter, Borrowed Time, Kobyashi Naru, Heavy on the Magick, Legacy, The Prince of Magic, Claws of Despair, Wizards & The Princess.

Derek Wong, 42 Ingram Road, Thornton Heath, Surrey. CR4 8EB.

• Wishbringer, Labyrinth, The Hobbit, The Hulk, Spiderman, Seabase Delta, Kobyashi Naru.

Ann Gray, 9 Alness Close, Birchwood, Lincoln, Lincs. LN6 0YX.

• Enchanter, Sorcerer, Spellbreaker, Leather Goddesses of Phobos, Infidel, Zork I, II, III, The Pawn, Kingdom of Hamil, Aftershock, Adventure Quest, Angelique a Grief Encounter, Arnold Blackwood Trilogy, The Big Sleaze, Black Fountain, Bugsy, Castle Blackstar, Castle of Skull Lord, Cursed be the City, Dracula, Dungeons Amethysts Alchemists n 'Everythin', Escape from Khosima, Espionage Island, Fantasia Diamond, Forest at World End, Gremlins, Haunted House, Hermitage, Heros of Karn, The Hollow Text and Graphic, Hunchback, Imagination, Jewels of Babylon, Kobyashi Naru, Lifeterm, Lords of Time, Mansion, Message from Andromeda, Mindshadow, Monsters of Murdac, Mordens Quest, Mountains of Ket, Never Ending Story, Nova, Nythyhel, Planet of Death, Rebel planet, Rigels Revenge, Robin of Sherwood, Robocide, Seabase Delta, Sharpes Deeds, Ship of Doom, Sould of Darkon, Spytrek, Subsunk, Theseusm, Top Secret, Very Big Cave Adventure, Warlord, Winter Wonderland, Wizard of Akryz.

Graham Wheeler, 2 Burford Close, Southdown, Bath, Avon, BA2 1JF.
Tel: 0225 26919.

• The Pawn, Sorcerer, Planetfall, Leather Goddesses of Phobos.

C.F.H Bass, 21 Third Close, E Molesey, Surrey, KT8 9PW.

● **Spectrum Plus 2**, 2 joysticks, printer with paper, over £200 worth of software. Will sell for £220 ono. Very good condition. Tel: Johnathan Bray 01-946 7507 after 6.15pm.

● **PBM Soccer**. Anyone interested in playing PBM Soccer? If so then Championship Soccer is the game for you. Price for each match ranges from 10p to 75p. Send this advert for half price membership. Compete in League, Cups and Europe. Prize money to winners. For full details send an SAE to PBM Soccer, 65 Milton Street, Monifieth, Dundee, DD5 4QF, Scotland.

● **CBM 64**, 2 datasettes, joystick, over £250 of games, over 36 issues of Zzap 64, all boxed and in top condition. Worth over £600, sell for £250 ono. Tel: 01-445 2754.

● **Spectrum 48K**, Quickshot Turbo + Interface printer, over 500 games worth over £1,000. Sell the lot for £400 or less. Tel: Darren Thompson, 0359 30159 after 4.30pm any day.

● **Spectrum 48K Microvitec colour monitor** as new £155. Computer change forces sale. Tony Squires, 63 Carlton Road, Boston, Lancs. PE21 8PA. Tel: 0205 68282.

● **Sega Console**. Nearly new, lots of games including Space Harrier, Out Run, Wonderboy. Worth over £300. Will sell for £220. Phone after 4pm on 021 427 6323.

● **CBM 64**, datasette, joystick, magazines, 50+ latest software including 720°, Out Run, Pirates, Defender/Crown, California Games etc. Worth £550+, sell for £250. Will swap for Atari 5220STFM. Tel: John (0823) 332388.

Public health warning

Needless to say, we cannot ourselves vouch for the credentials of any particular entry in this section. If you respond, it's at your own risk.

● **C64** and cassette interface plus hundreds of new and old software. Will sell for only £100 ono. Phone 01-958 6769 after 5pm.

● **MSX**, data recorder, 2 joysticks including Euromax, many games including Yie Ar Kung Fu II and Hypersports II, manuals, plus Atari 2600 console and games. All for £65. Phone Warren 0455 45389.

● **Atari 1029 printer** + 2 spare ribbons + Atari Writer plus £90 Atari 1050 disk drive + software including Gauntlet. Mini Office II, Tomahawk, Star Raiders 2, International Karate etc. £90. Tel 0276 25769.

● **Atari STFM**, 2 joysticks, F Basic, 100 mags, books, PD disks, over £400 of games, 2 copiers, cleaning kit. Worth over £1000, sell for £450 ono. Phone 0252 836718. Leave phone number. Excellent condition. Surrey.

● **New games!** Titles Hitman, Crazy Charlie, Paradise Powers and Garden £6.00 each or £10 for two. First 10 get free game. Send cheque/PO to Merseysoft, 23 Trent Raod, Rainhill, Merseyside L35 9LF.

● **ZX Spectrum** + complete with 2 joysticks, interface, 3 joysticks, record & manuals and 130 games. Price £150. For details phone 01517 3450 any time after 12.00.

● **CBM 64** and C2N tape recorder. Very good condition plus £300 of original software and books. The lot £200 ono. Phone 0823 279356.

● **Amstrad CPC 464** colour monitor, disc drive, lots of software, joysticks and firm-ware worth over £850. Sell £300. Tel Yatton 834907 after 6pm.

● **Spectrum +3**, multiface 3, joystick, data recorder, only 3 months old, over 180n games on tape and disk, assorted magazines. Bargain £275 ono. phone Paul 021-451-3201 (after 5pm).

● **BBC B 051.2**, 90 games, mags, books, dust cover, wordwise rom, all leads, cassette recorder, joystick, interface, good condition. Sell for £380 ono. Tel: (0491) 39562.

● **C64 Sound Expander Keyboard**, cassette deck, 2 joysticks, well over 100 games including an Editor and Composer for expander worth £400, sell for £300. Contact Mark 236 Darwen Road, Bromley Cross, Bolton. BL7 9JQ.

● **Amstrad CPC 464**, green monitor, TV modulator, light pen, stereo speakers, software, mags, worth £500+, sell £150. Phone 031 339 8252 (Edinburgh).

● **Commodore 64**, 3 C2N's, 2 joysticks, over £700 software, 50+ mags (inc every Zzap!), reset switch, back-up board + more. Good condition. Tel: Jozef, 061 748 6675 £300 ono.

● **Toshiba MSX**, joystick, datacorder, books, mags, plenty of software on tape & carts £100. Contact Paul Thorpe, 36 Fair Field Drive, Handsworth, London, SW18 1DL.

● **Spectrum 128K**, 300 games, joystick and interface, printer and interface, tape deck, Currah Speech, 80+ magazines £400 ono. Contact Mike on Wolverhampton 743090 after 5.00 weekdays, anytime Sat.

● **Atari 520STFM** as new, unwanted gift, includes six discs £239. Wanted any cheap arcade games for ST plus newish Daisywheel printer Atari compatible. Dave, 2 The Deerings, Harpenden, Herts. Tel: Harpenden 67348.

● **CBM64** cassette, over 100 games, music keyboard, books and over 80 magazines worth £900. Sell for £300 ono. Ring Simon Teesdale (London) on 01 653 1304.

● **Spectrum+ 48**, Opus disc drive, mouse, joyball, Currah Microswitch and £100 worth of software, machine code books. £250 for the lot. Phone James (0485) 70238 after 6pm on weekdays.

● **Multiface 3** , as new, duplicated gift £30. Phone (0909) 484260.

● **Amiga DPaint brush set.** Send £5 P/O to 68 Shefford Road, Meppershall, Beds, SJ17 5LL.

● **Spectrum**, tape recorder, 2 joysticks and interface, Spec-Drum and over £650 worth of software originals, including Elite, Uridium, Starglider, Trivial Pursuit etc. All for £200. Phone Stuart 0555 61891.

● **Commodore 64**, 1541 disk drive, cassette, Quickshot 4, Action Replay 3, 30+ games, 200 + disk games, £299 ono. Complete or may split. Tel: Simon (0438) 720030.

● **Spectrum 128**, tape recorder, interface, joystick, multiface 128, mags, £150 worth of software. All for £150. Write ro Anthony Doherty, 16 Belford Park, Ballymoney, BT53 6HR or tel (02656) 65401.

● **Amstrad CPC 464** monochrome monitor, modulator, 30+ games, 12 AA issues, 7 CWACPC issues, Guide to the Amstrad Micro. Games inc Out Run, Buggy, Exolon, Hit Pack Vol 2, many others. Everything worth £470+. Accept £280 for quick sale. Tel: Martin on Eckington 432689.

● **C64** computer cassette. 75 original games inc. Skate or Die, California Games, Out Run, Sentinel, Last Ninja, £160 ono. Worth £400. Phone 01-855 9462 after 4.30pm for quick sale.

● **C64** + drive, 2 x C2N, expert, FF IIIB, safety plugs + extras £250. All in working order. Part exchange for Amig stuff, A501 Expansion, Cumana or Commodore 1010. Tel: (0555) 811362 after 6pm. Scotland.

● **CBM 64**, cassette, joysticks, books, etc. £120. 1570 disk drive £95. Freeze Frame MK III B, £15. 3 vol Zzap 64 magazines £20. Phone (0977) 700796.

● **Commodore 64**, in perfect condition, C2N Datasette Recorder, Quickshot IX, Joyball and Simon's Basic. New £249.99, want £125. Ben Webster, Dag Cottage , Beckside, Nunburnholme, York. (0759) 304379.

● **Commodore 64** computer with 2 tape units, disk drive, over £400 software, modem, joystick. All for £290. Phone 01-533 3664.

● **Spectrum 128** with many top ten games such as Starglider and Gauntlet. Comes with twin joystick interface, Specdrum and Cheetah Mark 5 keyboard with interface. All boxed, as new, Worth over £800. Will sell for £195 ono. Tel: Steve on Brighton (0273) 553981.

● **Atari 520STFM** four months old. Over £200 worth software, mouse, disks, books, mags etc. £350. Phone John 01 554 4058 evenings, w/ends only. (Star Wars, Barbarian, Terrorpods, Defender, Guild, O.C.P. Hardball).

● **Spectrum + 48K** Starter kit with lots of games, will part exchange for Atari ST. Phone Paignton 552507 and ask for Steven.

● **CBM64**, C2N, joysticks, dust cover and over £220 of original games. Worth £500+. sell for £150. Tel: Llandudno (0492 47183. (3 months guarantee).

● **128K Spectrum + 2** (10 months warranty, 2 joysticks, 2JS interfaces, books, posters, 120 + magazines and over 210 originals inc. Elite, Zynaps, GAC, academy, Space Harrier and Killed Until Dead. All in excellent condition. Worth £2000. Offers? Send offers or for a complete list (instant reply) to: Greig McKenzie, 4/10 Gunnet Court, Edinburgh, EH4 4SG.

● **Amstrad CPC 6128** with green screen, colour modulator, cassette recorder, joystick, surge plug, some software, with boxes. Hardly used £270. Apply: 4 Mitchell Street, Birtley, Co Durham, DH3 1ER.

● **Commodore 64**, disk drive, printer, datacassette, mouse, joystick, Freezeframe, cover, Simon's Basic, Cartridges, games, utilities and books, £300. Phone Steve on (01) 368-4723.

● **Spectrum 128K**, still boxed and in very good condtion with 2 joysticks and interface, cassette recorder, music keyboard, £500 worth of software, magazines. Will accept £250 ono. Tel: Thirsk (0845) 577320.

● **Amstrad 464**, colour monitor, £300 worth of games, joystick and mags. Worth £600. Sell for £325. Simon Endsor, 112 Perry Hill Road, Quinton, Birmingham.

● **800XL**, 1050 disk drive, Quickshot Turbo joystick, many mags including Atari user and page 6, few blank disks, excellent starter package only £100. Tel: Spofforth 462 (N Yorks).

● **Spectrum +2**, perfect condition, boxed with Cheetah 125+ joystick, interface, 26 Sinclair magazines, £100 worth of 1987 software. Total value £260, only £100. Tel: Alan on Ascot (0990) 21461.

● **Sinclair 128**, microdrive, joystick, Alphacom printer, books, 34 cartridges, over £200 worth of software, mags, interface three copier, £280 ono. Will split. Phone Strathaven 21392 after 6pm.

● **CBM 64**, disk drive, cassette deck, modem, joystick and £600 worth of games, business and music software, 20 blank disks with comprehensive manuals. £300. Tel: Dorking 730253 after 7pm.

● **Amstrad CPC464** (colour monitor) also includes joystick, disc drive and £500+ of games, £250 without disc drive, £400 with disc drive. Phone Longridge 3231 (evenings).

● **70 pokes**, hints and cheats for your 64! Beat your friends' scores with our great new booklet, covering 70 chart-topping games! Only 99p from Robert Burgess, 1 Middlefield Road, Rotherham, S60 3JH.

● **Amiga**, Amiga, Amiga. Brand new unopened Amiga 500 with twelve months guarantee, Deluxe Paint, modulator and five disks. Phone 03212 2029 now and ask for Danny.

● **Cheetah MK5 keyboard** with Amstrad CPC interface £50. Buyer collects or plus carriage. Helsby, 1 Grenfield Court, Birch Tree Drive, Emsworthm Hants. PO10 7SA.

● **Atari SF354 ½ meg disk drive** P.S.U. 6 months guarantee, boxed, mint condition — Offers! Tel: 01-866 8094.

● **CBM 64**, 1570c - disk drive, 4-C2N's, 2 joysticks, over 500 games on disk and cassette including: Nebulas, S.E.U.C.K., Bubble Bobble etc. Accept £250 ono. (No splitting). Tel: 040081250 anytime (Glenn). If unobtainable phone 0636 78560.

● **BBC B 32K**, includes computer, 10 tapes of software, joystick and interface tape recorder + leads — only £220. Contact Jo Jenner 01-720 6238.

● **CBM128+** C2N deck + joystick and £600 worth of software worth around £800, but will sell for £150. Try before you buy. Ring Peter on 01-622 7424 anytime after 5pm.

● **CBM128**, D/D, printer, tape deck, joysticks, F/F, W/P, over £400 original games inc Defender of Crown, Guild of Thieves. Worth £1000+. Buyer collects. Offers welcome. Phone Scott on 01-735 7290.

● **Atari 800XL** computer, 1040 disk drive, both in immaculat condition, joystick, lockable disk box with disks and software, dust covers, manuals, magazines etc. £145. Ring 0342 (East Grinstead) 27072.

● **Bargain C64** including C2N, music Make, Quickshot II, Quickshot Turbo, over £290 software, load of magazines, worth over £400. Quick sale £150 ono. Phone Josef on Comberbach 891749.

● **Prism modem 2000** and RS232 interface for Amstrad CPC's, cost £150+ — sell for £100 ono. Phone (0326) 40613 and ask for Martin.

● **Top secret address book**. Nobody can open your book without your secret code. Find any of your friends' addresses, telephone numbers in seconds. Only £3.99. send P/O to P Humphreys, 10 Hazel Avenue, Darwen. Lancs. State your secret password.

● **CBM 64**, datasette, joystick, magazines, 50+ latest software including 720°, Out Run, Pirates!, Defender/Crown, California Games etc. Worth £550+. Sell for £250. will swap for Atari 520STFM, John (0823) 332388.

● **C64** and cassette interface plus hundreds of new and old software. Will sell for only £100 ono. Please phone 01-958 6769 after 5pm.

● **Amstrad SS A1 speech synth** + stereo speakers, perfect condition, still boxed. £10. Tel: 01-303 7136.

● **CBM 64**, disk drive, C2N cassette, 200+ games on disk and cassette. Games alone worth £1000+. Magazines, books, everything boxed. Superb offer £350 ono. Tel: 061 226 1703 after 8pm. 061 832 5809 5-8pm.

● **Amstrad 6128**, colour monitor, magazines, over £500 worth of software (inc Out Run, Bugsy Boy, Live Ammo, Matchday 2). Cost over £1000, only £450. Tel: 01 540 4073, Morden, Surrey.

● **Spectrum Plus 48K**, XRI Midi interface, Realtime and Steptime software, CZ Editor software, manuals and data recorder, also VTX modem. £200 ono. Contact Tony on Derby (0332) 367707.

- **Amstrad CPC 464** colour monitor, joystick, light pen, tutorial, games worth £350+ including Out Run, Elite, Get Dexter, GAC, Batman. £290. Tel: 042121 2547 after 6pm. Hampshire.

- **Amstrad CPC 464** with mono monitor, software (mostly games), magaines and books. Over £350 RRP!Will sell for just £150. Contact Lars Janssen, 38 Marshall Avenue, Egloshayle, Wadebridge, Cornwall, PL27 6BB.

- **Downing Street**, a 70 location GAC adventure + 4 other top quality games available for Amstrad CPC's £1.99 tape, £4.99 disc. Cheque/PO to: David Gibbon, 77 Quarry Crescent, Bearpark, Co Durham.

- **Commodore 64C** as new, boxed plus Blue Chip, 5 1/4" disk drive, plus Datel Action Replay MK3 cartridge. All six months old, lots of games etc. The lot £350 ono. Tel: Reading 872616.

- **C64 software**, cost £295, sell for £70 ono. Will split. Phone Ascot 22710 after 4pm. Ask for John.

- **Commodore 128**, CBM 1571 disk drive, Grafpad Two (disk) £320. Will split. Write to: Andrew Bell, 13 Leatham Crescent, Purston Feathers, West Yorkshire, WF7 5DX.

- C64, 2 datasettes, 2 joysticks, B/W TV, £600 of original software including GAC, Delta, Buggy Boy, Ninja etc. All boxed. Tel: Braintree 47590. Bargain £275 ono. Buyer collects. Shop value £875.

- **Opus Discovery disk drive**, Spectrum Plus computer, Multiface One, VTX5000 modem. Datarecorder, 18 disks, cassette software, joystick, all boxed. Excellent condition. £190. Tel: 091 251 1538 (Newcastle area).

- **Amstrad 6128**, colour monitor, multiface two, RS232 interface, two joysticks, tape deck and loads of software, sell for £350, worth much more. Phone Dave on 01-203 0329. after 6.30pm.

- **Commodore 64 tape recorder**, reset switch, backup board, joystick, approx 70 games and Spectrum 48K with joystick interface £150 the lot. Tel: Horsham 54523 evenings only.

- **Commodore 64**, data recorder, mouse and artist MPS 801 printer, many original games, utility programs and manuals, cover and magazines. £200 ono. Tel: (Lichfield) 254612 after 6pm.

- **Amstrad CPC 6128**, disc drive, colour monitor, joysticks, lots of games. Still boxed, unwanted gift. £300. Tel: Slough (0753) 72174 anytime.

WANTED

- **Amstrad Action** copies 1 to 15. Ring (0243) 528612.

- **Pokes**, pokes, pokes, I want loads of pokes — can swap. Send to: 5 Castle Hill House, Castle Street, Launceston, Cornwall.

- **Swap hardware for Spectrum**, Wafadrive multiface and mouse. What have you got? 48K/+ Spectrum and penpals etc. Paul, 3 Moorend Avenue, C/Wood, Birmingham, B37 5SD.

- **Amstrad DD-1** 3" disk drive with leads or Amstrad CPC 664 with colour monitor, must be in good condition. Reasonable offers considered. Phone Steven after 6pm (091) 388 8312.

- **Accelerator** plus D/Drive for C64, must be in excellent condition. Will pay by instalments or swap for new Datasette, software + £25. Kimwen Lok, 113 Tanners Hill, Deptford, London SE8 4QD.

- **Snap-Shot I or II**. Will pay up to £15. Must be in good condition. Write to Mark at 7 Trendle Road, Taunton, Somerset TA1 4NB.

- **2000AD** back issues wanted. Any programs from 1 to 300 considered. Will pay up to 10p over face value depending on condition. Phone (0467) 43872 and ask for Stephen.

- **Help!** can any ACE readers tell me if there are any brilliant American Football games for the Atari 520STFM where you control a team or a player as I am totally obsessed with the game. Must have good graphics. Paul Bridgeman, 116 Woodfarm Road, Malvern Wells, Worcs. W14 4PR.

- **Pokes** wanted for Firebird's Elite game — will pay. Call Dimitri on Bristol 522662.

- **Hardware for Amiga A1000**, reasonable price please. Also penpal contact Mick, 560 Rayleih Road, Eastwood, Southend, Essex. SS9 5HX. Also Selling MPS1000 printer or will swap for Amiga hardware.

- **Disk drive**. Any of you computer addicts want to sell a disk drive? (CBM64) Well if you do please contact me on 01-474 0006 and ask for Marie. Ring between 9.30am-5.30pm.

- **Printer or disk drive**. Looking for a C64 compatible printer or disc drive. Shall buy or swap for Spectrum 48K or Snooker Table. Tel: 01-864 9105. Must be in excellent condition and fully operational.

PENPALS

- 21 year old Amiga owner seeks penpals from all over the world. Write to Mick Hughes, 44 South View, Hazlerigg, Newcastle Upon Tyne, NE13 7BS. Bulldog rules the Dam?

- I would like anyone to be my penpal. I am very lonely. Please write to 47 Park Road, Upton Park, London. E6 1SA. Alex.

- Amiga owner wants penpals on the best home computer around! Interested in graphics, adventure games, music, demos and arcade games. Also exchange hints and tips on games. Please contact Andrew Sandle, 18 Anchor Road, Clacton on Sea, Essex. CO15 1HP. Tel: 0255 434740.

- Amiga 5000 owner wishes to exchange programs with other Amiga owners. Mattias Willefors, Klockartorp s.g. 50, 72344 Vasteras, Sweden.

- ST Penpals wanted to swap info + solutions. I am a 16 year old male. All letters answered. Darren Millin, 33 Glenburn Road, Newtownards, Co Down, NI. BT23 4HG.

- Amiga contacts wanted, any age guaranteed reply. Write to David Ashmao, 11 Squires Court, Longwell Green, Bristol, Avon BS15 7ED.

- Amiga users look! I own an Amiga 500 and wish to contact Amiga owners. Contact Bruce Wood, 36 Tickhill Road, Harworth, Near Doncaster, South Yorks, DN11 8PB, England. All letters answered.

- I own an Atari ST and am interested in hearing from penpals all over the world. I love all types of games especially adventures. Ian Culpin, 26 Glen Iris Avenue, Canterbury, Kent. CT2 8HP.

- Amiga and ST penpals wanted to swap hints and tips. Write to Tom, 92 Brockley Rise, Forest Hill, London, SE23 1LN.

- Atari ST penpals wanted. I am interested in games and graphics. Phone Julian oin (0705) 375583.

- ST penpals wanted from all over world to swap hints etc. Guaranteed reply. Write to Mark Birchall (16), 6 Cambourne Avenue, Laffak, St Helens, Merseyside, WA77 9EP.

- Theo, I own an ST and would like some penpals anywhere in the world to exchange hints & tips. All letters answered. 20 Eyhurst Avenue, Hornchurch, Essex, RM12 4RA.

- I own an Atari ST and want penpals all over the world. I enjoy adventures as well as arcade games. Ian Culpin, 26 Glen Iris Avenue, Canterbury, Kent. CT2 8HP.

- MSX penpal wanted (14+). Please write to: L Miller, 12A Lindale Gardens, Ashby, Scunthorpe, S. Humberside. DN16 2HW.

- Male or female penpal wanted (14-16yrs). I am 15 and own a Commodore 64C with disk drive. I enjoy programming and I have started to learn machine code. I like playing any sort of computer game. Write to: Mark Corder, 42 Byron Avenue, Brynteg Parc, Beddau, Pontypridd, Mid-Glamorgan, S Wales, CF38 2TW.

USER GROUPS

- Nationwide user group for Amstrad CPC's! Call Pete on 01-521 1277 or write to 14 Sumers Road, Walthamstow, London E17 6RX for details. News letter every month. Minimal member's fee.

- Interested in joining Amiga user group with bi-monthly newsletter with reviews, hints etc. written by readers. If so then write now to: P Adams, 13 Blackstone Hill, Redhill, Surrey, RH1 6BE.

- Spectrum Music Fanzine for music interface owners. Anyone using RAM, Cheetah, X.R.I. or E.M.R. interfaces (especially reviewers), send SAE for more information to: Musonic, 34 Kingston Road, Romford, Essex RM1 3NB.

- Attention all Commodore 64/128 GAC users! The GAC User Club is here! For details of how to join, write to: Barry Roberts, G.A.C.V.G, 109 Chambers Lane, Mynydd Isa, Nr Mold, Clwyd, N Wales, CH7 6UZ. We will be supporting GAC+ as soon as it hits the streets!

- Super Poke is a news letter that comes out every two months. In this letter you will get free info plus tips. To join the club and get free info you first must send for an info pack at 50p. Send this to: Super Poke Club, Sutton Computer UK, Richard Sutton, 22 Bridge Close, Banbury, Oxon, OX16 9SZ. Please wait 22 days at the most. Make cheques & PO's payable to Richard Sutton.

- **MSX LINK**. The Scottish office of Link publishes a monthly Fanzine for all MSX users, with hints/tips, reviews, reports, and lots more. Single Fanzines cost £1.20, or £8 for 1 full year of membership. Please make order payable to Craig Bell and send it to: MSX Link (ACE), North Lodge, Cairnhill Road, Airdrie, Lanarkshire, Scotland. ML6 9RJ. Tel: (0236) 64045 after 5.30pm.

OTHER

- **FREE** — multiface owners, for a free copy of Instant Access, Spectrum Multiface poke mag (also Datel snapshots). Send large SAE to: Catherine Redgrave, 30 New Barton Street, Salford, Manchester, M6 7WW.

- Anyone need young imaginative person to write games ideas, NOT programs, for ST's and Amigas, anything from adventures to Shoot 'em Ups. If so contact me on Leeds (0532) 456046.

- **Data-fox**, a new computer diary. Don't forget those inportant dates, get it now. Send cash or cheque for five pounds made payable to AM Software, 3 Leeside, Dring Houses, York. YO2 2PS

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THE BLITTER END...

Face the music

There were sackloads of entries for ACE 4's Casio MIDI gear competition, but we eventually managed to wade through them to bring you the results. The lucky winners, G.J.Gay of Cardiff (who gets the MT600 keyboard) and Colin McRitchie of Moray (who gets the DG20 guitar), had no trouble with the competition questions, but for anyone out there who's still in the dark the correct answers were *digital guitar* and *pulse code modulation.*

DG20 winner Colin McRitchie, seen here posing with his old digital air guitar.

Bonecruncher

Buyers of Superior Software's *Bonecruncher* (reviewed on p41) will be interested to note the exact terms of the 'Win a radio' competition inside. To get a free trannie it seems you have to send them a photo of the message that comes up when you complete the game in one go. Problem is, it doesn't say *you've* got to finish it, so a photo of a game someone else has finished (on a different copy or even version of the game) will do fine. In fact if we were so naughty as to print a photo of the message in ACE you could cut it out and use that! A mortified Superior spokesman said 'You won't tell anyone, will you?' - so naturally, we didn't.

Oops!

The lackeys and minions who actually get things done on ACE are a funny muddle-headed lot when it comes to peeks and pokes and suchlike. If you want a good reason why they shouldn't be let loose on full-blown listings, just look at how they managed to maul *Chris Wild's* issue 4 poke for Jack *the Nipper II.* The poor thing had four of its colons changed into semi-colons or commas, thus reducing it to gibberish. The lines concerned should have looked like this:

```
150 POKE 41797,A:POKE 42314,A
160 POKE 39820,B:POKE 34372,B
170 POKE 49884,C:POKE 49911,C
180 POKE 49897,C:POKE 49863,87
```

...but unfortunately, they didn't. Apologies, grovels and obsequiousness all round.

Men with(out) hats

Last month's Blitter End broke new ground with its coverage of edible hats. In yet another millinery milestone we now bring you the latest from Electronic Arts, who've just kitted out their UK Spectrum and CPC artists with some nifty PHM Pegasus headgear. Hats have long been the mainstay of the US software industry, of course – MicroProse boss Bill Stealey has literally dozens – but this is believed to be a first for the UK market.

EA's artists in their new titfers. Compare and contrast with Bill Stealey, pictured here in just one of his many fine hats.

Thanks to...

This month the ACE crew would like to thank Bath arcade owners **R & K Edwards & Co** without whom this month's cover would have been impossible. If you're in the area their arcade, at 28 James St West, is well worth a look: the downstairs positively bulges with hot new machines and classic oldies, while the *After Burner* stand-up in the shop front has certainly swallowed its fair share of our meagre wages before now.

Join the ACE team!

Are you an honest, reliable person who's over 14 years old? Would you like to earn free magazines and software by making a few visits to your newsagents each month? Then here's the opportunity.

We're looking to recruit a nationwide team of local representatives to help us check how well ACE is selling in each area. Their main task will be regular checks to ensure that enough copies of the magazine are reaching local newsagents. In return we're offering:

- A free copy of ACE each month.
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You can apply to become the ACE rep for your area by writing to us with the following information:

1. Your name, address and (if possible) phone number(s).
2. Your age, occupation and which computer(s) you own.
3. The names and addresses of any newsagents you would be able to make regular visits to. Try to give at least three (but do not list very small newsagents which don't regularly stock computer titles).
4. Details of any responsible tasks you've undertaken in the past.
5. The names, addresses and (if possible) phone numbers of two people outside your family who could give you a character reference.

Post this to: **ACE Representative application, 4 Queen Street, Bath BA1 1EJ.** (Closing date for applications: March 10th, 1988)

Those who are appointed will then receive a printed calling card, and an information pack outlining exactly what is involved.

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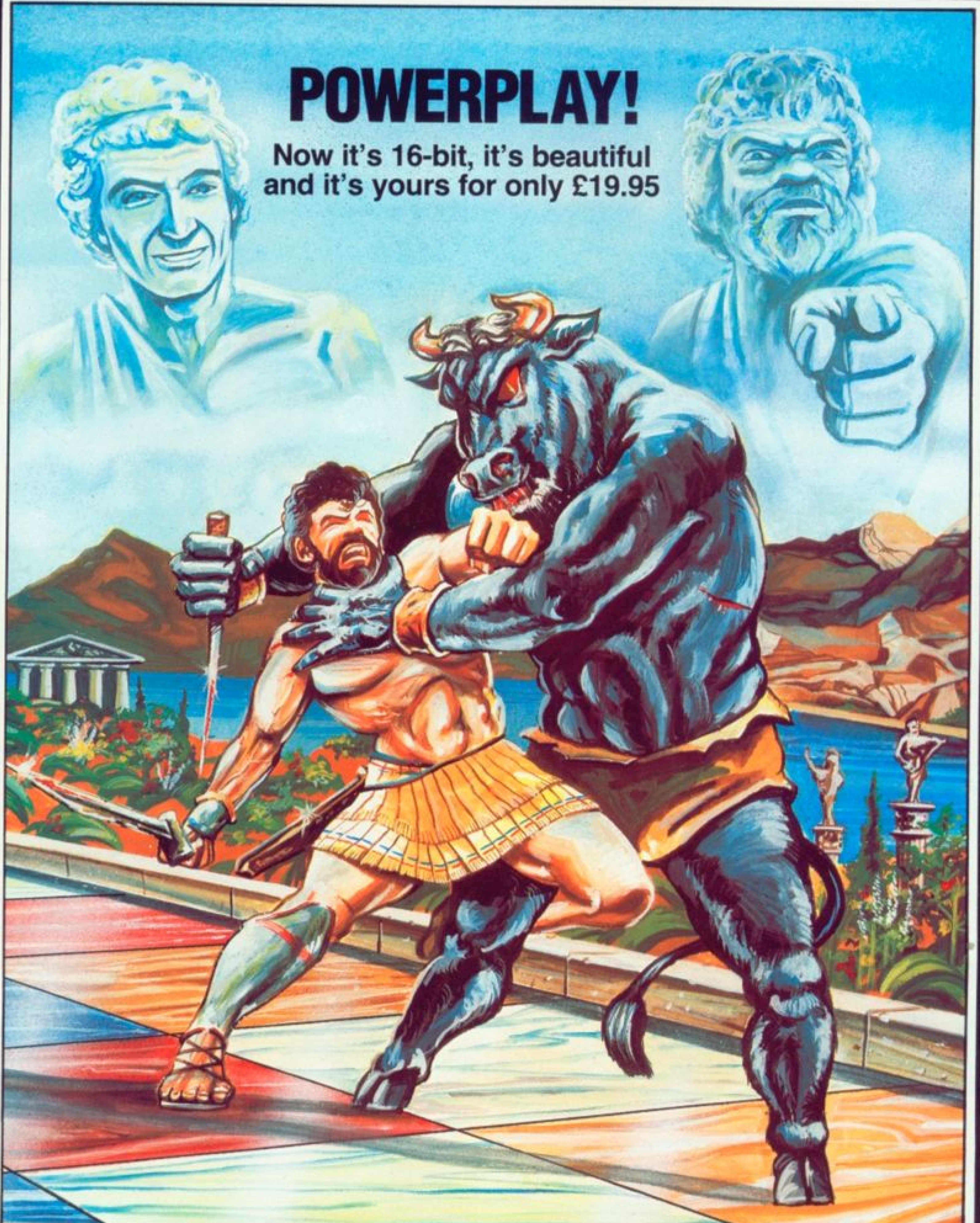
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